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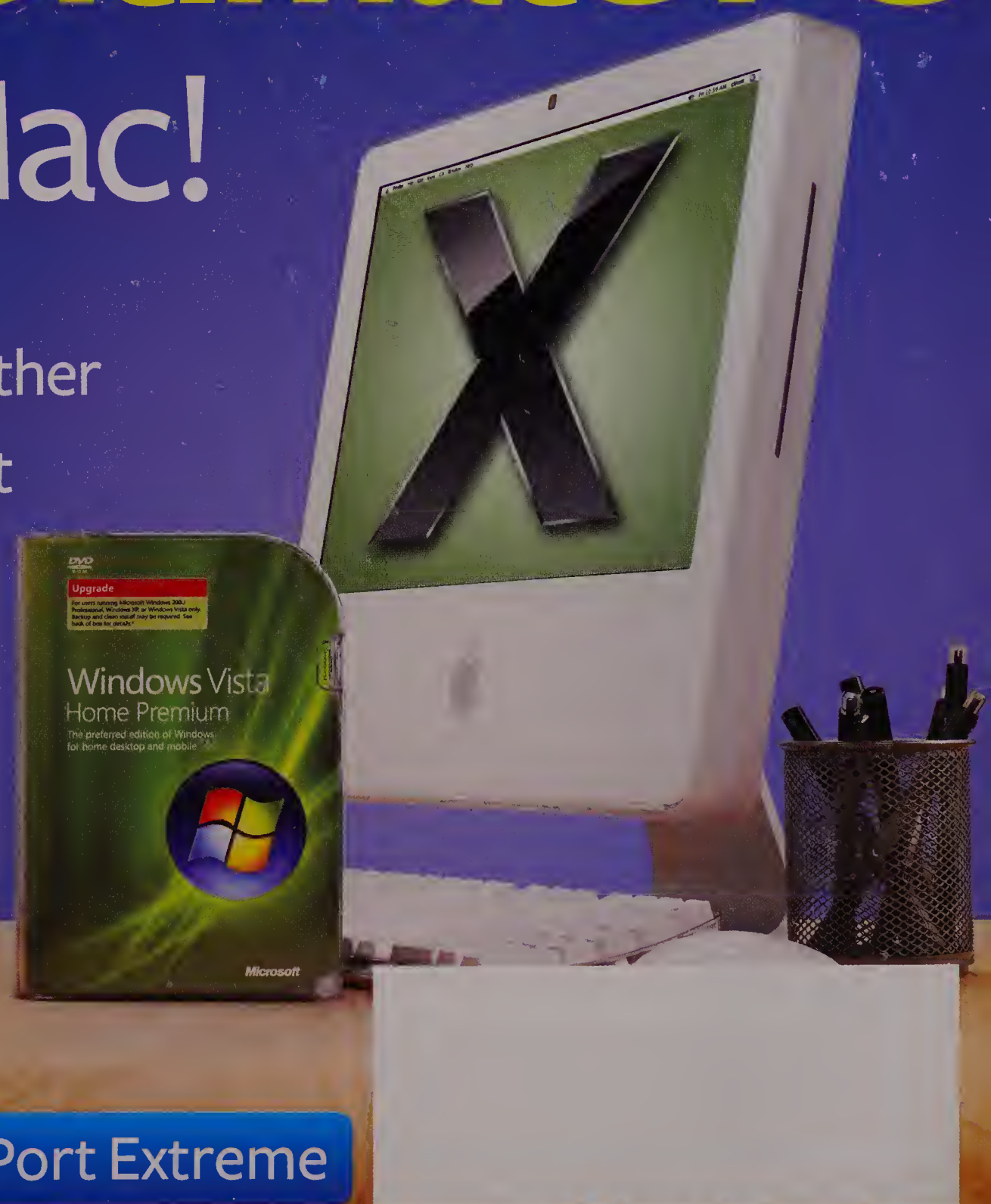

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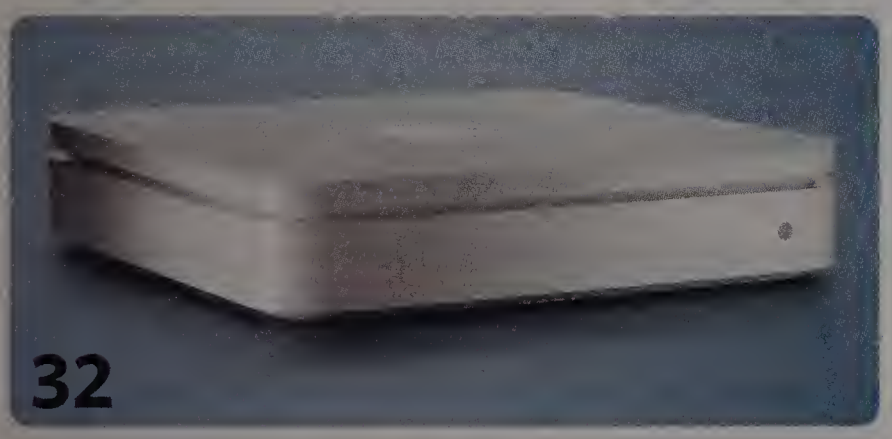

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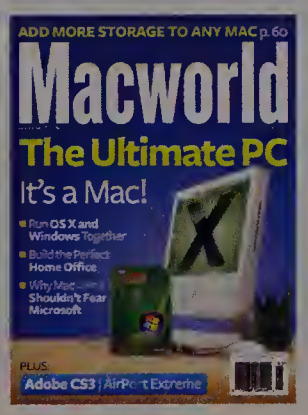

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MACWORLD.COM'S TOP 5

The top 5 stories on Macworld.com are:

1 **Editors' Notes: Bill Gates Loses His Grip on Reality** Peter Cohen thinks the Microsoft founder has his own "reality distortion field" (macworld.com/1701).

2 **Hands On: Running Vista Home on a Mac** In spite of what its license says, you can run Vista Home via virtualization apps (macworld.com/2369).

3 **Review: AirPort Extreme Base Station** Apple's new wireless router adopts the 802.11n standard (macworld.com/2370).

4 **Opinion: Why the iPhone Will Change the (PC) World** *Computerworld* looks at how Steve Jobs changed the world—again (macworld.com/2371).

5 **News: Apple to Advertise iPhone During Oscars** Apple uses the Academy Awards show to promote the iPhone (macworld.com/2419).

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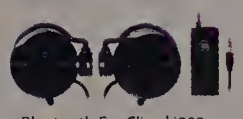

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The Post-Windows World

Mac users have nothing left to fear from Microsoft

We've been writing about Windows a lot lately. The most recent example is this month's "4 Ways to Windows" (page 42), in which Rob Griffiths compares four software tools that let you run Windows on the Mac.

The reason we're writing so much about that other operating system is that Apple's switch to Intel processors, and the consequent ability to run Windows on Intel-based Macs, has profound implications for the Mac. It could eradicate the Mac persecution complex once and for all, change the outright hostility that many Mac users feel for Windows into shoulder-shrug indifference, and make the Mac more popular than it's been for a long, long time.

Trapped in a Tiny Box

Some Mac users harbor a pure hatred for all things Microsoft. A few refuse to use any Microsoft products on principle. (I can't wait to see the letters we'll get about putting an actual Windows box on the cover of *Macworld*!) Others don't really mind Windows but simply find the Mac friendlier and easier to use.

Wherever you fall in the spectrum, you've likely experienced the frustration of knowing that, as a Mac user, some cool products are out of your reach. Perhaps it's a new Web site that runs only in the Windows version of Internet Explorer, or a software program that has no Mac support, or an innovative piece of hardware that won't work properly when you plug it into a Mac.

Now, that frustration has largely gone away. Almost every day now, I play a session of Diamond Mind (diamond-mind.com), a baseball simulation that runs only on Windows. I've watched hours of free streaming video, using Netflix's Watch Now feature (netflix.com), even though that feature is currently compatible only with Windows.

Is it inconvenient to switch into Windows to use these things? Sure it is. Should Web and software developers support the Mac natively, without making us switch between Windows and OS X? Of course they should. But some of them never will. From now on, that refusal doesn't mean you can't visit that Web site, run that program, or plug in that peripheral if you really want to.

PHOTOGRAPH BY PETER BELANGER

I can't wait to see the letters about putting a Windows box on the cover of *Macworld*.

Fear of Abandonment

When the Intel Macs were first announced, many commentators said that it would mean the death of the Mac. Once Macs could run Windows, the reasoning went, developers would stop developing Mac versions of their software. That hasn't happened yet, and I don't see it happening on any huge scale anytime soon.

I take some comfort, for example, from a recently unearthed 1997 Microsoft memo (macworld.com/2631). The memo was written during contract negotiations with Apple. In it, Ben Waldman (then the head of Microsoft's Mac Business Unit) admits, "The threat to cancel Mac Office 97 is certainly the strongest bargaining point we have." The threat has grabbed headlines. But if you read the memo, you'll see something else: a group of software developers committed to making the best Mac product they can.

That commitment produced Office 98, an impressive release that righted a lot of the wrongs in the legendarily bad Word 6. Not only was Office 98 faster than previous versions, it was vastly more Mac-like. The failure of Word 6 taught Microsoft a valuable lesson: Mac users want to use software that works like the Mac, not like Windows.

That lesson still holds true today. The ability to run Windows software might give Mac users some flexibility. But if they liked the way Windows worked, they'd buy Windows PCs. Most Mac developers, including Microsoft, understand that. The ones who don't have left the Mac market, and good riddance.

Where To Next?

If Microsoft killed off Office for Mac now (and there's no sign of that happening), it wouldn't mean what it would have meant in 1997.

Back then, the loss of Office would have meant doom for the Mac. If it were to happen today, Mac users could simply run Office for Windows or a file-compatible competitor.

The people at Microsoft's Mac Business Unit still have a strong commitment to releasing the best Mac software they can. The next version of Office will be Intel-native and compiled in Apple's Xcode development environment, a sign that Microsoft has made a serious investment in the future of the Mac version of Office.

And in the meantime? We can run all our favorite Mac programs *and* whatever Windows ones we might need. Who else but Mac users can do that? Nobody, that's who.

Got a comment? E-mail jason_snell@macworld.com or post a message at macworld.com/forums.

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May 2007, Volume 24, Issue 5

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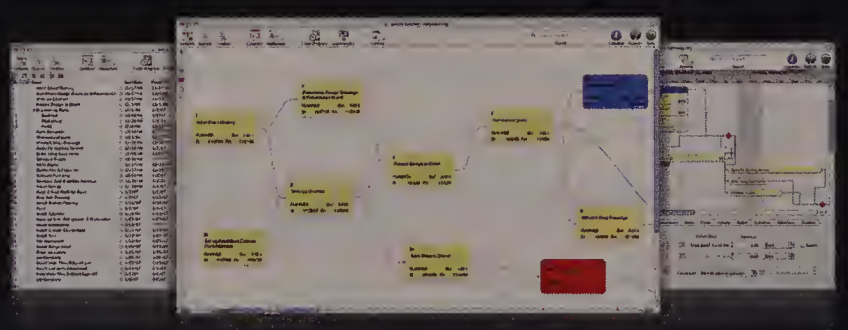

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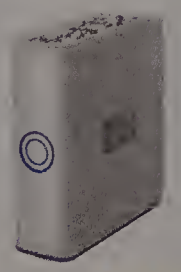

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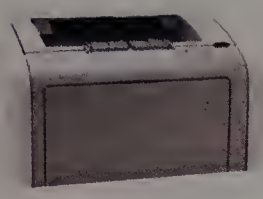

$118.99
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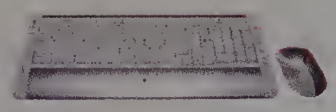
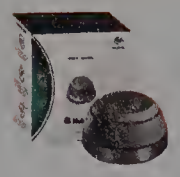
LaserJet 1020 15 ppm Laser Personal Monochrome Printer



$64.99
Logitech 967664-0403
White Desktop S 530 Laser Dedicated one-touch controls for Mac



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Logitech 965162-0403
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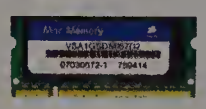
2GB (2 x 1GB) DDR2 667 (PC2 5300) Dual Channel Kit Memory for Apple Notebook



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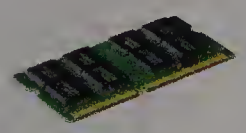
Corsair VSA1GSDS667D2
1GB DDR2 667 (PC2 5300) Memory for Apple Notebook



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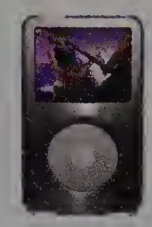

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Windows without Windows

Plus: more tech trends, Web power tips, and black MacBooks

Trend Watch, Part 2

In your coverage of the multiple-OS Mac ("What's Next," January 2007), you ignored the most significant cross-platform development for Mac users: the ability to run Windows software *without Windows*. That's exactly what you can do with Codeweaver's $60 CrossOver Mac (www.codeweavers.com). The only reason most Mac users would want to run other operating systems is to run a specific application that's not available for the Mac. In most cases, that's likely to be a Windows app. Buying and installing a full copy of Windows just to run one or two applications is too high a price. CrossOver lets you get away without paying it.

Ken Norkin

In listing the various players in the Blu-ray versus HD DVD format war ("What's Next," January 2007), Jonathan Seff left out one extremely significant name: Microsoft already strongly supports HD DVD; players in that format are available for the XBox 360.

Adam Lloyd

There are three reasons Blu-ray will come out on top in the optical drive format wars. First, capacity. People want more storage space, and Blu-ray's higher capacity gives it an advantage over HD DVD. Second, Sony. The PlayStation 3 already has massive market share, which means Blu-ray does too. Third, brand. Let's just agree that Blu-ray is a much sexier name than HD DVD.

Charles S. Branch

There was an error in your recent story about technology trends, in particular the section on flash memory. You wrote: "Historically, flash memory's major disadvantage has been price: in 2002, it cost about $260 per gigabyte, compared with $150 per gigabyte for a hard drive." But surely 1GB of hard-drive space didn't cost $150 in 2002.

Patrick Schannong

Actually, 1GB of hard-drive space *did* cost $150 per gigabyte in 2002—if you were buying it in the form of a 1-inch hard drive (the form factor most directly comparable to flash memory). While we spelled that out in the chart accompanying the story, we should have made it much clearer in the text.—Dan Miller

I recently switched to a MacBook Pro because of its Intel chip and ability to run Windows. I discovered an unintended benefit of doing so shortly thereafter: It turns out that a realty Web site I need for my job isn't fully functional under Safari. Parallels solved the problem, by letting me browse the site in Internet Explorer. But then I found that my new printer (a Canon Pixma i90) couldn't print when I was in Parallels. After much discussion with Apple's and Parallels' tech support, I returned Parallels, got my money back, and loaded Boot Camp instead. Switching back and forth has been time-consuming, but at least I can print and browse the sites I need. I'm still ecstatic that I migrated to the Mac but am disappointed with the rough transition.

Mark Galvan

OVERHEARD ON THE FORUMS

So far, I am disappointed with the Apple TV. What can it do that a Mac mini can not? Apart from the HDMI out, nothing. In fact, it does a lot less.

Geff
macworld.com/2537

A few suggestions for ways to improve the iPhone: user-accessible battery, user-accessible flash memory cards, GPS support, compatibility with Exchange, and open up development to third parties.

Steve S
macworld.com/2613

PHOTOGRAPHS BY PETER BELANGER; APPLE TV IMAGE COURTESY OF APPLE

Eliminate paper. Liberate your cool.

Mac

winner macworld eddys

Adobe Acrobat

SCAN

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Decoding the Web

In "Be a Power Browser" ("Decode the Web," February 2007), you missed a Safari shortcut that I find invaluable. Pressing ⌘-L highlights the address bar. This shortcut—along with the autocompletion of Web addresses—is one of the quickest ways to navigate to different sites without removing your hands from the keyboard.

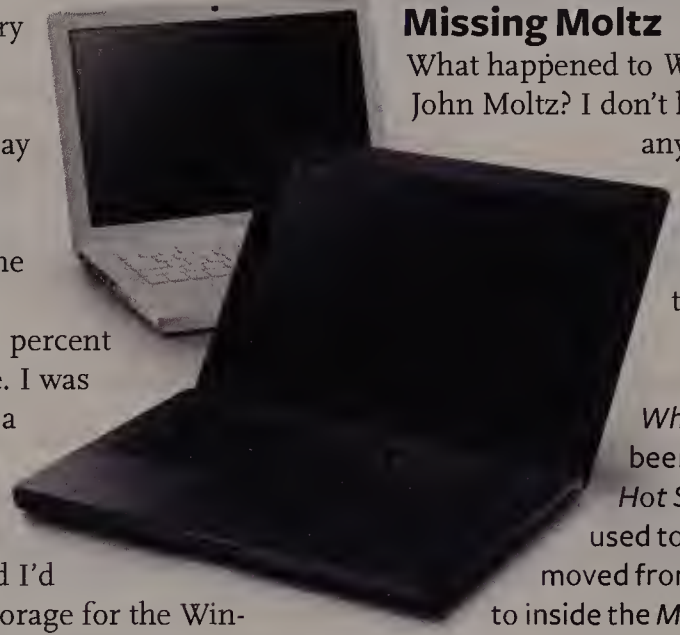
Keith Bradnam

Regarding Sarah Milstein's tips for searching the Web, I wanted to bring another resource to your attention. BookFinder.com is a dedicated search engine for books, capable of querying over 100,000 booksellers from over 50 countries, with a total searchable inventory of more than 100 million books.

Barbara Franzoia

Reviewing Reviews

I beg to differ with Henry Norr's comment that the black MacBook is not a "rational choice" (*Reviews,* February 2007). Walking into my local CompUSA the day the Core 2 Duos hit the shelves, I decided to buy the black MacBook because of its 50 percent larger hard drive. I was upgrading from a 12-inch PowerBook G4 with an 80GB hard drive and figured I'd need the extra storage for the Windows apps I'd be running. When I figured out what it would take to swap the smaller internal drive of the white MacBook for a larger one, the black model became a very rational choice indeed.



Ben Levi

Regarding your review of Data Backup 2.1 (*Reviews,* February 2007): How can you give a ★★★★½ rating to a backup product that doesn't support optical drives? The ability to back up data to a DVD or CD should be mandatory for a backup application.

Curtis Christensen

Replying to Feedback

In your January *Feedback* section, you suggested that a reader who wanted to share Address Book contacts check out the program's Sharing preference pane. There's one problem: That works only if you subscribe to .Mac. Many of us, disgusted with the service's poor performance and high price, are deciding not to.

Bill Martin

Regarding Neal Gallagher's letter in your February *Feedback* section (which was in turn a reply to "Back Up Photos on the Road," November 2006): I live in Colorado, and when I'm in the field, I'm really *in the field.* From most of the places I shoot, I can't upload my shots to an online service. I can't even get a cell phone signal. So I carry several power inverters in my Jeep. If I want to unload photos from my camera, I use my constantly recharged iPod or MacBook. Of course, I could just use film and have none of these issues.

Patrick Soehl

Missing Moltz

What happened to *What's Hot* by John Moltz? I don't know about anyone else, but I happened to enjoy that particular part of the magazine.

Todd Boruff

What's Hot has been retired (and *Hot Stuff,* where it used to reside, has moved from the back page to inside the *Mac Beat* section). But we hope to continue working with John in other ways. For example, he was in our February *Mac Beat* section ("Fortune-Tellers"), offering up his fearless (and funny) predictions for 2007.—Dan Miller

I laughed out loud when reading the February issue of *Macworld* the day after Steve Jobs introduced the iPhone. Who knew that John Moltz would make the most accurate prediction when he said Apple's iPhone would have only one button!

Tom Bober

Correction

In "Get in Sync" (January 2007), we singled out the Cingular E62 smart phone as an example of a Symbian OS–based device that could synchronize data via Apple's iSync software. iSync does not support the E62, but the Nova Media (www.novamedia.de) iSync plug-ins we mentioned in the article will enable synchronization through iSync.

We provided an incorrect URL in "The Net as Computer" ("What's Next," January 2007). Sproutit's e-mail program Mailroom is located at www.sproutit.com/mailroom, not at mailroom.com.

Contact Us

Post comments on our forums (www.macworld.com); send them by mail to Letters, Macworld, 501 Second Street, 5th Floor, San Francisco, CA 94107; or send them by e-mail to letters@macworld.com. Include a return address and daytime phone number. Due to the high volume of mail we receive, we can't respond personally to each letter. We reserve the right to edit all letters and posts. All published letters and forum comments become the property of *Macworld.*

More Like Windows

With Apple putting out advertisements trying to woo Windows Vista switchers, the company could do one thing to make that transition easier: During the setup screens that appear the first time you boot your Mac, there should be an option to choose the default Mac interface or make it more PC-like. That second option would, for example, toggle control-key modifiers. (I know that you can do this in System Preferences, but it's easy only if you know that option is there.) The system could also move program menus to the top of individual file windows (as on the PC). It wouldn't hurt Mac users at all and might help retain PC users trying to make the switch.

Thomas Dalton

Intel Mac

Make sure your system works.

The complete Macintosh problem solving utility. Now for both Intel and PowerPC Macs.

Why throw away your money on a multitude of utilities that force you to learn different interfaces and deal with a variety of companies and/or different products? Micromat gives you everything you need in one box–for far less money. TechTool Pro is a complete Macintosh repair shop in a box. In fact, it's so good that Apple includes a copy of its sibling, TechTool Deluxe, in its AppleCare Protection Plan. If you experience freezes, kernel panics, or other problems, TechTool Pro can help you get your computer running smoothly again. Nothing else even comes close to TechTool Pro! Use TechTool Pro for:

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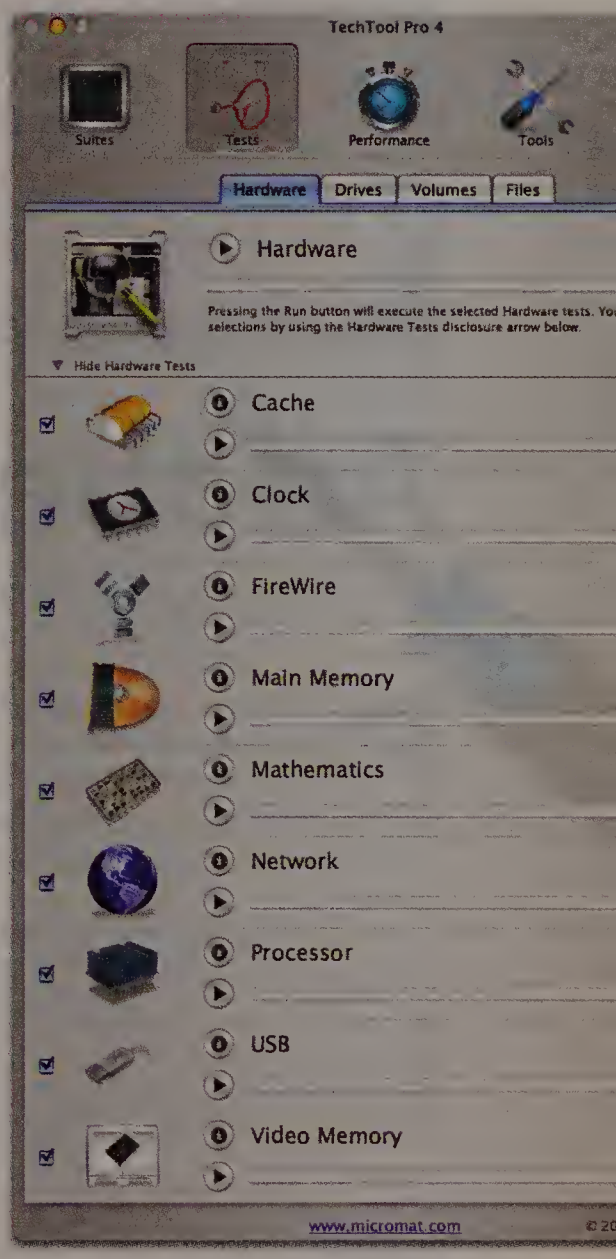
TechTool Pro is a feature-packed release of the most comprehensive diagnostic, repair, and maintenance utility of all time! A must-have Macintosh application, this utility from Micromat is truly the one indispensable product you need to ensure your Mac is always trouble free.



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DESIGN

Adobe Introduces CS3

New Creative Suite applications set to ship soon

Perhaps the biggest thing keeping creative-professional Mac users from snatching up powerful Intel-based Apple hardware—such as the Mac Pro—is the lack of native applications from Adobe.

That may change now that Adobe has finally announced the upcoming release of its native Creative Suite 3. All of its components except for the audio and video products will be available in April. (The rest will ship in early summer 2007.)

With CS3, Adobe has worked to make interfaces more consistent among the various applications and improve their integration. Let's take a look at some of the highlights of Adobe's massive release (all observations are based on prerelease software).

Photoshop

Photoshop is Adobe's bread-and-butter software. The company even released a public beta version of Photoshop CS3 last December, in part to show users how much work had already gone into the first Universal version of the application. In the new version, Adobe has polished Photoshop's interface with palettes that collapse into compact docks. The program's retouching and selection tools gain new precision, while Smart Filters let you apply image filters and other effects without altering an image's original pixels. Printing enhancements, new versions of Camera Raw and Adobe Bridge, and a long list of workflow refinements round out the new release.

At the same time, Adobe has also introduced an enhanced version of the application called Photoshop CS3 Extended, which builds on the standard version with sophisticated 3-D, image-analysis, and video features. There's no question that Photoshop CS3 is the most powerful version yet, but it's also the most complex. Inexperienced users may be daunted by the sheer quantity of options it provides.

Illustrator

Illustrator CS3 is the 13th release of the venerable vector illustration package,

SCREENSHOTS PROVIDED BY ADOBE

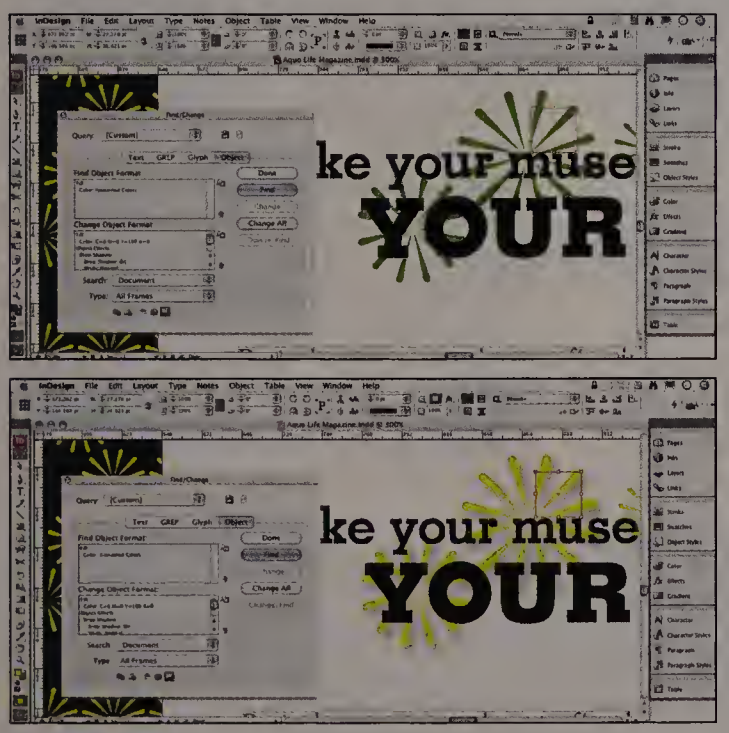
but users will feel anything but unlucky with the new version's additions and changes. While recent releases have seen some very cool new features, color selection and application has long been cumbersome in Illustrator. CS3 makes dramatic changes in this area with the addition of Live Color, a new collection of color-related palettes that makes it simple to mix colors, explore different color possibilities and themes, and easily apply entire color schemes to groups of objects.

Illustrator's basic drawing tools have seen numerous improvements, such as control points that enlarge when you mouse over them; a context-sensitive control panel that automatically populates with editing tools whenever you select a path; and the ability to align and distribute points, just as you can with entire paths. Other welcome new features include Eraser and Crop tools, improved Flash support, and a new Isolation mode that provides a nice alternative to grouping and hiding.

InDesign

The new version of Adobe's flagship layout program offers an intriguing mix of a few new features and lots of refinements throughout the software. InDesign CS3 promises a smoother layout and production workflow punctuated with some newfound, dramatic creative capabilities.

InDesign CS3 adds eight lighting effects that you can apply independently to objects, frames, and contents, as well as text variables that make it easy to update text automatically throughout your document. Object-level search and replace could greatly ease the burden of reworking a design. And a bevy of operational enhancements include live page previews, master-page import, multiple file import, saved search queries, and a collapsible dock that frees up screen real estate.



InDesign Find and change colors easily.

Dreamweaver

As part of its acquisition of Macromedia, Adobe got Dreamweaver, which many users consider to be superior to Adobe's own GoLive Web design program. Dreamweaver CS3 brings Intel Mac support, adds basic integration into the Adobe Creative Suite, incorporates Adobe's Spry Framework (a library of JavaScript code that lets you add interactive page elements and effects to a Web site), and expands on the program's already formidable Cascading Style Sheets (CSS) tools.

Although Dreamweaver isn't as tightly integrated with the Creative Suite as the other programs are, you can now copy directly from Photoshop and paste into Dreamweaver; a dialog box then lets you resize the image and set optimization settings appropriate for Web graphics. The new Spry Framework adds a raft of JavaScript-powered features to Web pages: Spry effects let you create attention-grabbing visual effects such as shrinking, enlarging, and fading page elements; Spry widgets offer new page-layout possibilities, such as drop-down menus, tabbed page elements, advanced Web form validation, and interactive, sortable HTML tables.

Dreamweaver CS3 also adds many new tools to help manage the often confusing world of CSS. The Manage CSS feature lets you move CSS rules within a style sheet, move them between sheets, and quickly export them into a new external sheet. To help troubleshoot cross-browser CSS problems, a Browser Com-

NEWS IN BRIEF

Apple Makes *Fortune*'s 2007 Top 10

For the first time, Apple finds itself in the top ten of *Fortune*'s list of the most admired companies in the United States. Ranking number seven overall for 2007, Apple falls only slightly behind IBM in the computer industry category. For the second straight year, Apple leads all companies for innovations, and within the computer industry, Apple also ranks first in people management and quality of products and services. Its only poor score comes in social responsibility. To create the 63 industry lists in the survey, *Fortune* and its partner, Hay Group, polled executives, directors, and securities analysts. They then asked the 3,322 people who had responded to the industry surveys to select the ten companies they admired most.

QuickerTek Brings 802.11n to All

Apple's 802.11n Enabler (included with the new AirPort Extreme Base Station or available separately for $2) lets users update the wireless chips in many Mac models. It allows Mac Pros, as well as Core 2 Duo MacBooks, MacBook Pros, and all but the entry-level iMacs, to take advantage of the fast wireless standard. People using Core Duo Macs, however, haven't been able to reap the full benefits of the latest alphabetic advance in wireless networking. Now, QuickerTek is selling upgrade cards for older Macs that bring their wireless capabilities in line with those of the Core 2 Duo models. You can buy a $149 self-install kit (with full instructions and tools) or spend an additional $50 to have QuickerTek install it for you. So there's no need to buy a new Mac to enjoy the faster wireless speeds.

patibility Check can analyze your Web page and CSS and then generate a report that identifies potential CSS-related display problems.

Fireworks

Another former Macromedia product gets an overhaul in CS3: Fireworks. The latest version offers new and enhanced features for creating Web graphics and site prototyping. The additions include the ability to create multiple pages and export them to HTML, scale bitmap and vector symbols without distorting their geometry, and export Flash and non-Flash slide shows; enhanced graphic symbols containing properties that you can control via the new Symbol Properties panel; sublayers; and improved compatibility with Photoshop, Flash, and Illustrator files.

Designers will appreciate the ability to use just one Fireworks file to show prototypes of Web sites to clients. Instead of having to export numerous files or layers as HTML pages, designers can create and link multiple pages within Fireworks, demonstrating both visual and navigational design.

Contribute

Adobe Contribute's changes are best described as under the hood. The biggest change is that Contribute is now Universal, for better performance on Intel-based Macs. It shares an improved Web-page rendering engine with Dreamweaver CS3, so it has better support for CSS and new support for PHP include tags. The new version also offers improvements in blog editing, support for new browsers, and integration with Adobe Bridge, as well as many miscellaneous bug fixes.

After Effects Professional Check out the Brainstorm feature.

Audio and Video Apps

Although the software itself won't be available until summer, Adobe also announced several audio and video applications as part of CS3.

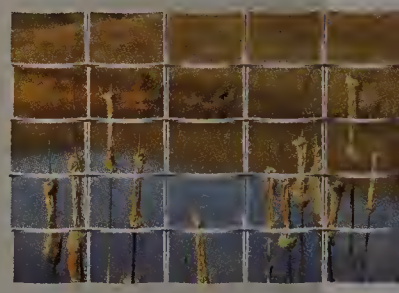
After Effects Professional Adobe's motion graphics and visual effects software takes a step into the future with its first Universal version. But it also adds a host of new features, including Shape Layers, a vector graphics creation tool with built-in shapes that you can use to replicate and animate vectors; a Puppet tool that lets you animate layer objects by placing pins; better integration with Photoshop and Flash; per-character 3-D text animation; and a Brainstorm feature to speed up the trial-and-error process inherent in motion graphics workflows.

Premiere Pro Premiere last appeared on the Mac several years ago, as Premiere 6.5. Premiere Pro is a higher-level video-editing application that rivals Apple's Final Cut Pro in many ways. Premiere Pro, which runs only on Intel-based Macs, supports all major standard definition and high definition video formats (although you'll need third-party hardware for some formats), multicam editing, and integrated titling. It also includes a high-quality slow-motion Time Remap-

CREATIVE NOTES

Using Photoshop Actions

When you think of adding features to Adobe Photoshop, you generally think of plug-ins, like those offered by Alien Skin Software, Flaming Pear, and onOne Software, all of whom offer excellent plug-ins at reasonable prices. But there's more to improving Photoshop than just adding plug-ins; specifically, I'm referring to Photoshop Actions and Styles. Photoshop Actions are basically a recorded set of instructions that dictate what to do with a particular document, saved in a way that lets you apply them automatically. The first place to go to find actions is Adobe's own Photoshop Exchange (macworld.com/2590), which offers more than 5,000 actions. Another place to look is PicsToBits (www.picstobits.com). But for 34 of the best (and free) actions, check out PanosFX (www.panosfx.com), which includes B&Big Picture (shown here).



Final Print

One common complaint about Final Cut Pro is that it's difficult to get notes and comments out of the program. Now, U.K. software developer Digital Heaven has released Final Print 1.0.1, a $99 stand-alone application that makes collaboration with Final Cut Pro much easier. It lets you add time-code–accurate markers with comments to sequences and then print out the contents of those markers with thumbnail images of the video (www.digital-heaven.co.uk).

FIND IT ONLINE Visit the Creative Notes blog at macworld.com/ **2519**

PRODUCT WATCH

SOFTWARE

BookMaker 2.0, from MyPublisher (www.mypublisher.com): Software tool lets users create photo books printed via MyPublisher's book-printing service (free).

Curator 1.0, from KavaSoft (www.kavasoft.com): Artwork manager for iTunes finds album covers and reveals at a glance which albums in an iTunes library are missing artwork ($18).

Disco 1.0.2, from DiscoApp.com (www.discoapp.com): CD- and DVD-burning software features full multisession support, disc erasing, one-to-one disc copies, and burning of VIDEO_TS folders, among other capabilities ($30).

DocumentWallet 1.0.1, from GGT Enterprises (www.receiptwallet.com): Document-management application lets users organize paper and electronic documents in much the same way that iPhoto manages digital images ($30).

AFTER EFFECTS'S SCREENSHOT PROVIDED BY ADOBE

Junk in the trunk.

This Volkswagen is carrying an extra burden. Several hundred actually.

We're not talking weight, or the various awards Jetta has won—most recently Autosite.com's Best Car for the Environment—or even the responsibility of being North America's best-selling Volkswagen.

Those aren't exactly tough burdens to bear. We're talking about the hundreds of German-engineered advancements we've wedged inside it over the years.

Features like uni-body construction, 8-speaker sound system, 6 standard airbags[†] traction control and ABS brakes.

Not to mention an extra large trunk.

Each one adds a level of performance to the Jetta. But each one can also add weight to its price—if we're not careful.

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The 2007 Jetta. Priced for the people at $16,490.[††]

©2007 Volkswagen of America, Inc. [†]Airbags are supplemental restraints only and will not deploy under all crash circumstances. Always use safety belts and seat children only in the rear, using restraints systems appropriate for their size and age. [††]Base MSRP for 2007 Jetta with manual transmission. 2007 Jetta model shown with optional 18" wheels, MSRP $19,615. Prices exclude transportation, title, taxes, options and dealer charges. Supplies limited. Actual price determined by Volkswagen dealer.

ping tool, color-correction tools, and output options for mobile devices.

Premiere Pro also includes Encore, another Intel-only product, for DVD production (akin to Apple's DVD Studio Pro). An Export To Encore feature in Premiere encodes and sends content to Encore, which you can use to create standard DVDs and Blu-ray DVDs, as well as Flash projects. One of the program's coolest features is its ability to replicate an authored DVD project with menus and video as a Flash project for the Web.

Premiere Pro Shown here are the color correction controls and timeline.

Soundbooth Adobe also has a brand-new application: Soundbooth, an audio editor for video pros. In addition to offering simple editing controls, Soundbooth includes audio cleanup tools for removing background noise, hisses, clicks, and pops; built-in effects such as EQ, reverb, and time and pitch stretching; and the ability to add and edit Flash cues.

The Suites

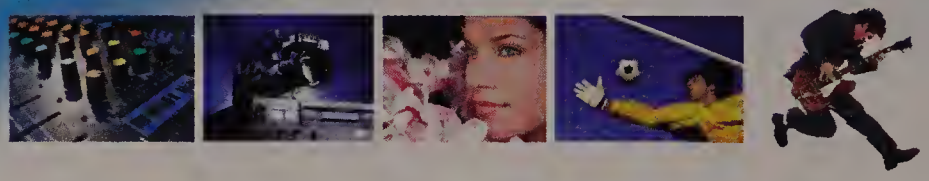
Adobe will sell the applications separately, and Adobe CS3 also comes in several suite configurations. Design Standard ($1,199) includes Photoshop, Illustrator, InDesign, and Acrobat Professional; Design Premium ($1,799) includes Photoshop Extended, Illustrator, InDesign, Acrobat Professional, Flash Professional, and Dreamweaver. Web Standard ($999) includes Flash Professional, Dreamweaver, Contribute, and Fireworks; Web Premium ($1,599) includes Photoshop Extended, Illustrator, Acrobat Professional, Flash Professional, Dreamweaver, Contribute, and Fireworks. Production Premium ($1,699) includes Photoshop Extended, Illustrator, Flash Professional, After Effects Professional, Premiere Pro, Soundbooth, Encore, and OnLocation. Master Collection ($2,499) contains every one of the CS3 applications, including the Extended version of Photoshop. Adobe is also offering upgrade prices for individual applications and suites.

Cindy Cashman, **Galen Gruman**, **Jim Heid**, **Ben Long**, **David McFarland**, **Tom Negrino**, and **Jonathan Seff** contributed to this story.

FIND IT ONLINE Read our complete CS3 coverage at macworld.com/ **2611**

SCREENSHOT PROVIDED BY ADOBE

Your Mac Pro's Dream Date



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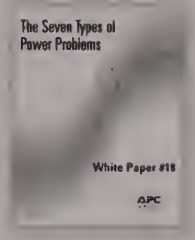

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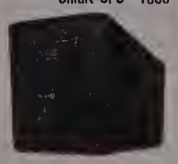

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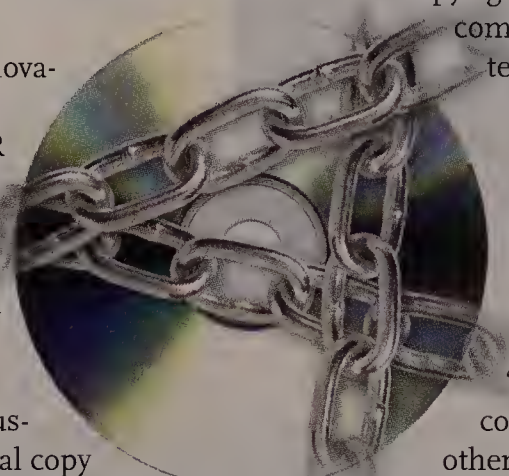
LEGAL

RIAA Opposes Fair Use Bill

Recording industry trade group fears piracy

With the popularity of sites such as YouTube, there's been a lot of talk lately about the concept of *fair use*. A new bill in the U.S. Congress aimed at protecting fair use rights for consumers of copyrighted material, however, would "legalize hacking," in the words of the Recording Industry Association of America (RIAA).



The Freedom and Innovation Revitalizing U.S. Entrepreneurship (FAIR USE) Act, introduced in late February 2007 by U.S. Representatives Rick Boucher, a Virginia Democrat, and John Doolittle, a California Republican, would let customers circumvent digital copy restrictions in six limited areas when copyright owners' business models are not threatened, said Boucher in a press release. So-called fair use doctrine allows customers of copyrighted works to make limited numbers of copies, particularly for reviews, news reporting, teaching, and research, without fear of prosecution.

The bill would allow exemptions to the anticircumvention restrictions laid out in the Digital Millennium Copyright Act (DMCA), passed by Congress in 1998.

"The fair use doctrine is threatened today as never before," said Boucher. "The [DMCA] dramatically tilted the copyright balance toward complete copyright protection at the expense of the public's right to fair use."

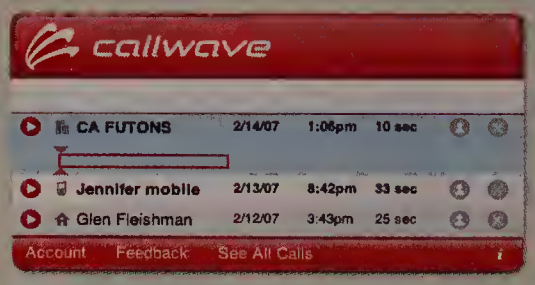
But the RIAA feels the bill would effectively repeal the DMCA. The bill would "allow electronics companies to induce others to break the law for their own profit," the group said in a statement. "The difference between hacking done for non-infringing purposes and hacking done to steal is impossible to determine and enforce."—GRANT GROSS

FIND IT ONLINE Read Congressman Boucher's press release at macworld.com/ **2608**

WIDGET OF THE MONTH

CallWave Visual Voicemail

Why wait for the iPhone's Visual Voicemail feature when you can sign up for CallWave's free service now? With a quick trip to the Dashboard widget, your voice mail is available via your Mac (www.callwave.com).—DAN FRAKES



GAME BUZZ

Travelogue 360 Paris

MacGameStore.com and Big Fish Games have released Travelogue 360 Paris, a $20 puzzle game featuring detailed 3-D images (a demo is also available). Each level of Travelogue 360 Paris has you searching for souvenirs, some in plain sight and some well hidden. You're preparing to be interviewed for an upcoming article in *Travelogue 360* magazine. You'll see 3-D views of the Eiffel Tower, the Champs Élysées, and other popular Parisian landmarks. The game features Explorer and Tourist modes, fun facts, and minigames (www.macgamestore.com).

The Sims Life Stories

Scheduled to be out soon is The Sims Life Stories, an all-new Sims game for the Mac from Aspyr. Life Stories is the latest installment of the enormously popular game franchise where you make decisions that affect the lives of simulated people—sims—as they go about their days. You help them get established professionally, develop lasting personal relationships, and even decorate their homes. The Sims Life Stories is what happens when The Sims meets a serial drama like *The O.C.*—it tells the stories of Riley Harlow and Vincent Moore, two sims at different crossroads in their love lives. The $40 game features a comic romantic plot that unravels through 12 chapters (www.aspyr.com).—PETER COHEN

FIND IT ONLINE Find more game news at macworld.com/ **2518**

PRODUCT WATCH

HARDWARE

Coolpix P5000, from Nikon (www.nikoncoolpix.com): 10-megapixel camera features a 3.5× optical zoom, an optical viewfinder, and a 2.5-inch LCD ($400).

HomeDock Deluxe, from Digital Lifestyle Outfitters (www.dlo.com): Second-generation version of iPod dock for connecting to TV and stereo systems adds the ability to navigate video contents of an iPod via a TV screen ($150).

MacCuff Pro, from Sonnet Technologies (www.sonnettech.com): Under-the-desk mounting and security bracket designed for Power Mac G5s and Mac Pros suspends the desktop from the bottom of the desk ($130).

Pixma iP90V, from Canon (www.usa.canon.com): Portable photo printer outputs at up to 4,800 by 1,200 dpi and can create prints up to 8.5 by 11 inches ($250).

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Shawn King, Host/Exec. Producer, Your Mac Life

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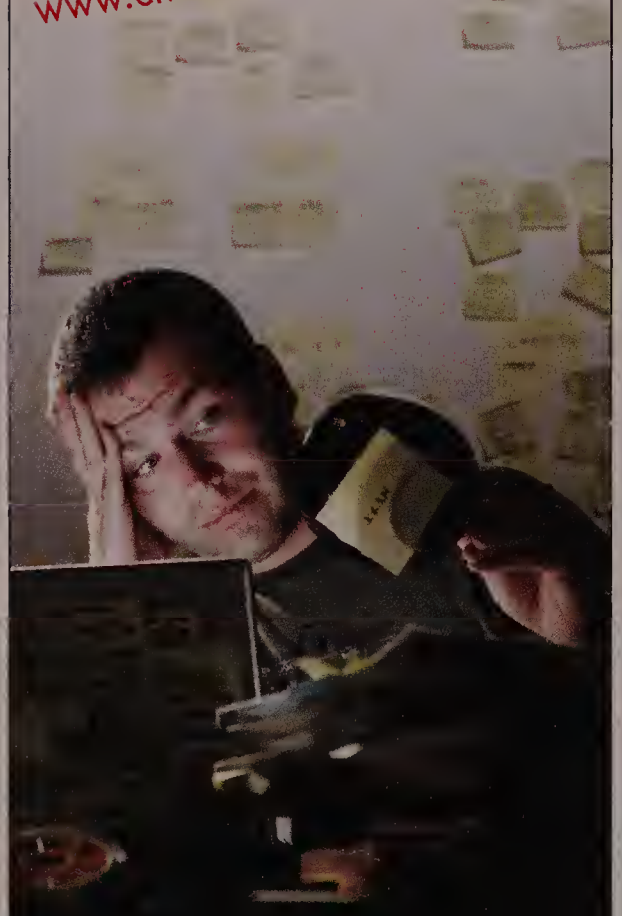

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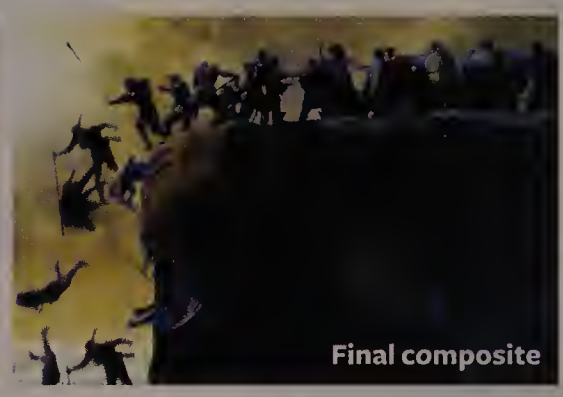

Final composite

VIDEO

Macs Help on the Big and Small Screens

Cinematographer worked on *300* and *Lost*

With projects like television's smash hit *Lost* and the new movie *300* under his belt, cinematographer Larry Fong knows a thing or two about getting tough jobs done and using the right equipment.

"There were a lot of reasons to use the Mac," says Fong. "It's so easy to organize things and I was able to communicate with all of the different crews."

You would expect someone in Fong's position to use all of the top pro applications in the industry, but Fong turned to one of Apple's most basic apps, iPhoto.

"There's a specific look in *300* that was accomplished with a lot of experimentation with digital stills and importing them into iPhoto," says Fong. "I could have used Photoshop or Aperture, but iPhoto is the simplest to use. I created an album for every scene in the movie and it worked great. Just a quick e-mail and they are off to the lab—I don't even know how you would do that on a PC."

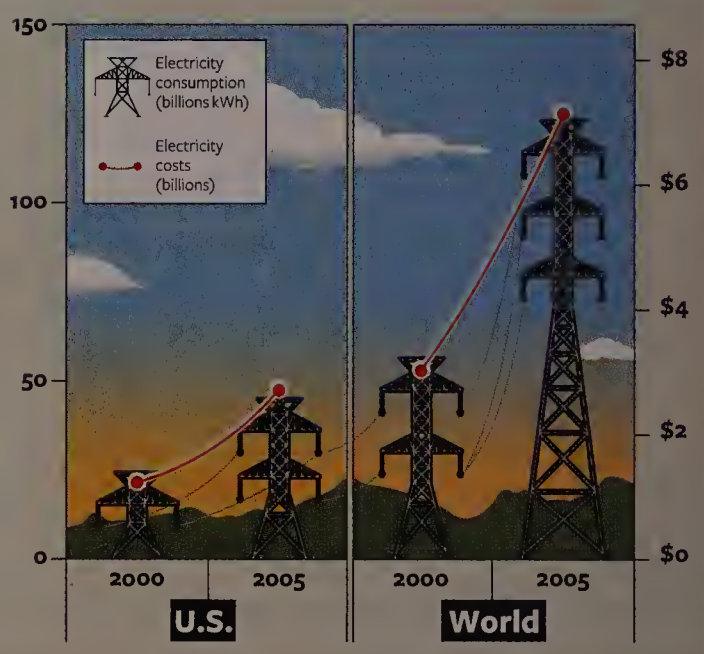
For the *Lost* episodes, Fong would send his iPhoto images from Hawaii to the studio in Los Angeles ahead of the film that shipped daily. The studio would know how he wanted the episode to look based on the photos by the time the film showed up.—**JIM DALRYMPLE**

FIND IT ONLINE Visit the 300 Web site at macworld.com/ **2610**

TECH TRENDS

Servers

Servers need to be on all the time. That, plus the growing number of computers required to serve up our info, adds up to a whole lot of juice. A new study finds the amount of electricity needed to run servers has doubled since 2000—costing businesses $7.2 billion worldwide as of 2005. Based on today's energy usage and server market forecasts, scientists estimate that servers could burn up 76 percent more power per year by 2010.—MARYANN JONES THOMPSON



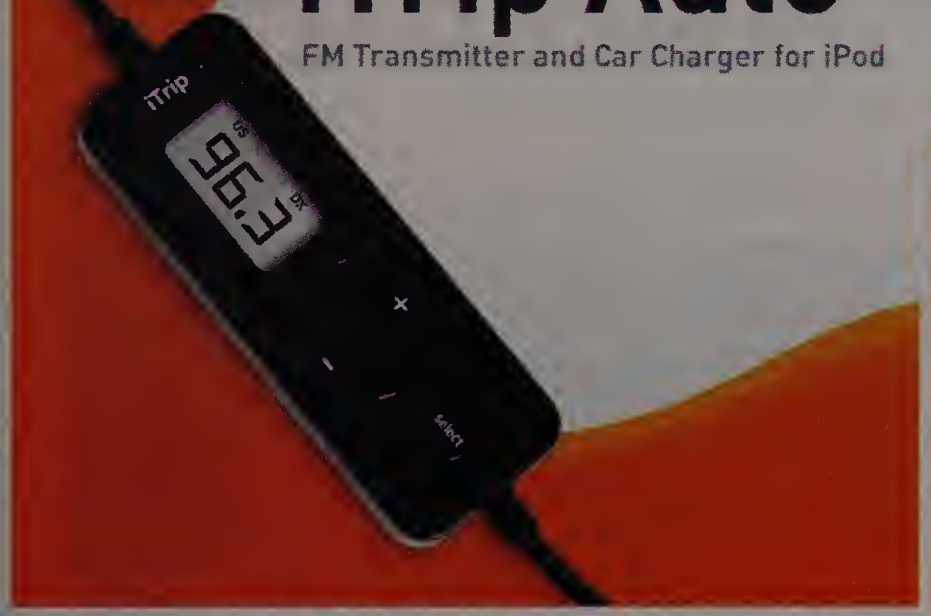
INFOGRAPHIC BY COLIN HAYES

Amplifi

2.1 Sound System for iPod

iTrip Auto

FM Transmitter and Car Charger for iPod



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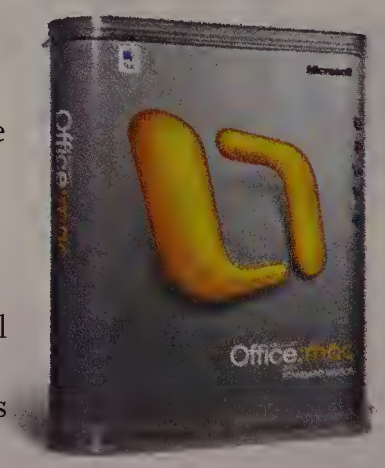
BUSINESS

Office for Mac Was Almost No More

Microsoft threatened to kill product in 1997

The relationship between Apple and Microsoft has always been a complicated one. But now it's come to light that Microsoft threatened to dump the Mac version of Office a decade ago, according to a memo made public in a recently settled Iowa antitrust case against Microsoft.



The 1997 e-mail from Ben Waldman, then head of Microsoft's Macintosh development group, to Bill Gates urged Mac Office 97's release. The suite was eventually released as Office 98 in March 1998.

But Waldman understood that the next Mac Office was a stick Microsoft could use against Apple. "The threat to cancel Mac Office 97 is certainly the strongest bargaining point we have, as doing so will do a great deal of harm to Apple immediately. I also believe that Apple is taking this threat pretty seriously," Waldman wrote to Gates.

Waldman also wrote in the memo that keeping Mac Office alive was a good idea because Microsoft could test new features on the suite's users. "Because Mac Office is so much less critical to our business than Windows, we have the flexibility to test out new things in the product before we try them on Windows," wrote Waldman. "I've personally also found the Mac market interesting because I've seen so many trends appear there first and eventually become important on Windows."—**GREGG KEIZER, *COMPUTERWORLD***

FIND IT ONLINE Read the complete memo at macworld.com/ **2612**

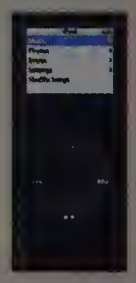
DIALOG BOX

"Nowadays, security guys break the Mac every single day. Every single day, they come out with a total exploit; your machine can be taken over totally. I dare anybody to do that once a *month* on the Windows machine."

Bill Gates, in an interview with *Newsweek*'s Steven Levy, when asked about similarities between Mac OS X and Microsoft Vista.

"You can't be fully aware of your surroundings if you're fiddling with a BlackBerry, dialing a phone number, playing Super Mario Brothers on a Game Boy, or listening to music on an iPod. Tuning in and tuning out can be a fatal combination on the streets of New York."

New York State Senator Carl Krueger, proposing legislation to fine New Yorkers $100 for using electronic devices such as iPods while crossing streets.



BILL GATES PHOTOGRAPH COURTESY OF MICROSOFT

PRODUCT WATCH

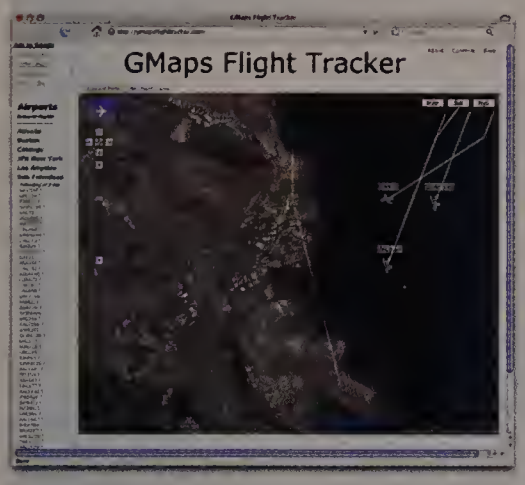
HARDWARE

Cyber-shot DSC-T100, from Sony (www.sonystyle.com): 8.1-megapixel camera features a 5× optical zoom and a 2.5-inch LCD ($400).

EasyShare 5500, from Kodak (www.kodak.com): All-in-one printer includes a 35-sheet automatic document feeder, a duplexer for two-sided scanning and printing, and a 33.6-Kbps fax modem and optional Bluetooth wireless connectivity ($300).

Hot Stuff

What we're raving about this month



Programmableweb.com

Mashups aren't just for music anymore. Since the application programming interface (API) for Google Maps is open to the public, anyone with a little XML knowledge can create a Web-based interface that combines data from multiple sources. No place is this phenomenon more evident than at ProgrammableWeb.com, where you can find a treasure trove of mashups involving maps, shopping, social interaction, and more. One of my favorite creations is the GMaps Flight Tracker (gmapsflighttracker.com), which displays inbound flights to seven major airports on top of a Google map. It contains visual location on the map, along with specific flight data such as altitude and speed, albeit in knots (programmableweb.com).—**CURT POFF**

PowerShot TX1

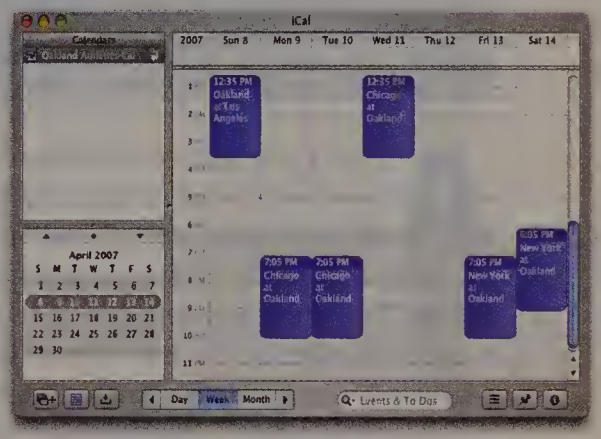
Video and still cameras seem to be merging more all the time—My Canon PowerShot A510 takes surprisingly decent video for a still camera. Now, Canon's $500 PowerShot TX1 combines video and still in a surprisingly low-priced, attractive package that's got me thinking it might be time to upgrade. The TX1 takes still shots at 7.1 megapixels and records video at 16:9, 720p HD at 30 frames per second. The TX1 has a 10× optical zoom lens, ISO settings from 80 to 1600, face recognition, an orientation sensor, and more. While Canon's new offering probably won't get you professional-quality video, and its lack of a microphone input port is certainly a bummer, at $500 it's well positioned as an entry-level camcorder for budding filmmakers. Think of it as the 8mm for the digital age, without any of the unpleasant Nicolas Cage associations (www.usa.canon.com).—**DAN MOREN**

Ghost Action 1.1

I like to get things done, but not enough to implement the full-fledged Getting Things Done productivity system that's so popular these days. That's why I like Ghost Park Software's $20 Ghost Action 1.1. It makes managing your to-do list easy, without becoming a project unto itself. Ghost Action can organize your list by project, due date, or (as the GTD system advises) context. That last bit means that you organize tasks by where or how you do them—at the office on your computer, in your car doing errands, and so on (www.ghostparksoftware.com).—**DAN MILLER**

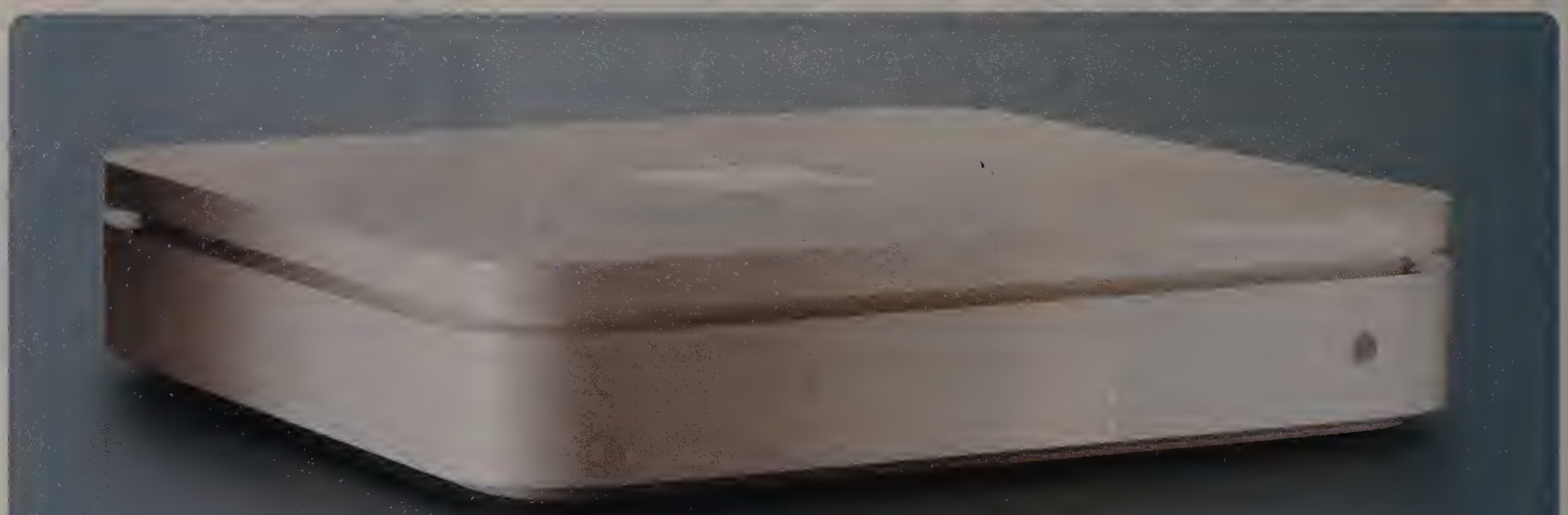
Dock Extender

For several years now, I've been asking vendors to come up with some sort of dock-connector extension cable that would let you use your iPod with dock-cradle accessories without having to remove the player from a protective case (you *do* use a case, right?). At long last, SendStation has come to the rescue with the Dock Extender (pricing not yet announced), an adapter that plugs into your iPod's dock-connector port—it's small enough to fit the dock-connector opening on most iPod cases—and extends that connector enough to fit in most dock cradles. It also lets you use many bottom-mounted iPod accessories, such as FM transmitters and microphones (www.sendstation.com).—**DAN FRAKES**



Yahoo Sports iCal Calendars

The start of baseball season brings with it a sense of anticipation and yearning. No, not for a pennant but for a reliable iCal schedule of your favorite team's games. This season, instead of waiting for Apple or a random stranger at iCalShare.com to whip up a schedule for you, just head over to Yahoo Sports and find the home page for your favorite team. Click on the Scores & Schedule link, and you'll find not only an online version of the team's schedule, but also a link to subscribe to the calendar via iCal (as well as in other formats). Yahoo Sports offers the same feature for NBA, NHL, and college sports, so your favorite team's game time is never more than a click away (sports.yahoo.com).—**PHILIP MICHAELS**



AirPort's Extreme Technology

Apple's new wireless router adopts 802.11n standard **BY GLENN FLEISHMAN**

Apple's new AirPort Extreme Base Station solves three major wireless networking problems in one blow: speed, range, and configuration. The gateway also makes sharing multiple printers and hard drives across a network as easy as plugging in a cable.

This new wireless router promises roughly five times the throughput and twice the range of the previous model. And because it's based on a new wireless standard, 802.11n, which incorporates the older b and g standards, it is backward-compatible with Apple's earlier AirPort (802.11b) and AirPort Extreme (802.11g) adapters. For best results, however, you must leave the b and g standards behind.

The Base Station's product name hasn't changed, but the unit itself has a radically different form. The alien spaceship shape is gone; the new Extreme looks like a slightly squat Mac mini, making it easier to stack in multiples (although you may need to select channels carefully to avoid interference when stacking). It also sports a three-port 10/100BaseT Ethernet switch, a useful feature for small mixed (wired and wireless) networks; Wi-Fi routers have offered this feature for years, at a fraction of the cost of Apple's previous Base Stations. The lack of Gigabit Ethernet is surprising in such an advanced product, considering that all Macs now come equipped with that networking standard.

AirPort Extreme Base Station

4½

PROS: Significantly faster than the previous model; better wireless range; simpler configuration; easy printer and hard-drive sharing across a network.

CONS: No Gigabit Ethernet; lacks protection for individual folders on shared hard drives.

OS X COMPATIBILITY: 10.2 (Jaguar); 10.3 (Panther); 10.4 (Tiger); configuration utility only, 10.4.8

PRICE: $179

COMPANY: Apple, www.apple.com

Speed Thrills

When sending data between an 802.11n-enabled Mac connected wirelessly to an AirPort Extreme Base Station and a second Mac connected to a Base Station via Ethernet, we consistently saw speeds of just over 90 Mbps. When they were both connected to their Base Stations via Ethernet, we achieved 94 Mbps in each direction. With the two Macs connected to their Base Stations wirelessly, rates reached almost 50 Mbps in each direction; they exceeded 90 Mbps only when we restricted the data flow to a single direction.

The new Base Station provides high-speed coverage over impressive distances—far longer than we have seen with Apple's 802.11g Base Station and other similar 802.11g gateways. For example, we took a MacBook up to 100 feet and 20 vertical feet away from a building containing the Base Station and still maintained a connection—through intervening walls, floors, and concrete partitions—with speeds between 1 and 15 Mbps, and an average of 5 Mbps. We measured the highest achieved speeds as far as 30 feet away on the same floor with one intervening wall.

The top speeds we saw required the use of the 5GHz band and *wide* channels, which allow the AirPort Extreme to use twice the range of frequency that it

PHOTOGRAPH BY PETER BELANGER

could access with the b and g standards. The Extreme can use either the 5GHz or the 2.4GHz band (most Wi-Fi routers use 2.4GHz only), but to avoid interfering with Bluetooth, Apple doesn't allow wide channels in the 2.4GHz band.

When a network was using 2.4GHz channels (or ranges of frequencies) that other nearby networks shared—as many as five networks showed up in testing on one channel—we still saw typical speeds of 50 Mbps. On unused channels, we saw rates of 70 to 80 Mbps.

However, add the transmissions of just one legacy AirPort client—one using the older b or g standards—on the same network, and throughput plummets. In a test with two laptops, one containing an 802.11b adapter and the other an 802.11n adapter, with both transmitting data at full speed, overall throughput dropped to a range of just a few megabits per second, to 30 Mbps. But in more likely scenarios, in which an 802.11b or 802.11g computer is sending data only intermittently, throughput between 802.11n hardware should remain high.

A minor glitch arose in our testing: if you have the AirPort Extreme set to share a single IP address and connect the Base Station to a larger network, throughput to the larger network drops to 30 Mbps for 802.11n and 60 Mbps for Ethernet. Throughput on the Extreme's wireless connections and built-in Ethernet switch remains unchanged. With sharing turned off, which is typically the case on a large network, the glitch disappears. And with broadband cable, DSL, or fiber services that operate more slowly than 30 Mbps, this problem won't crop up. Apple confirmed the problem, and is looking into a solution.

Improved Utility

In addition to redesigning the Extreme itself, Apple also revamped the aging AirPort Admin Utility and ditched several related setup assistants and the AirPort Client Monitor. Apple's new AirPort Utility neatly combines all those features into one package with less clutter.

AirPort Utility's streamlined steps for setting up a secure wireless network will put novice users at ease. Advanced users have access to more and better-organized settings.

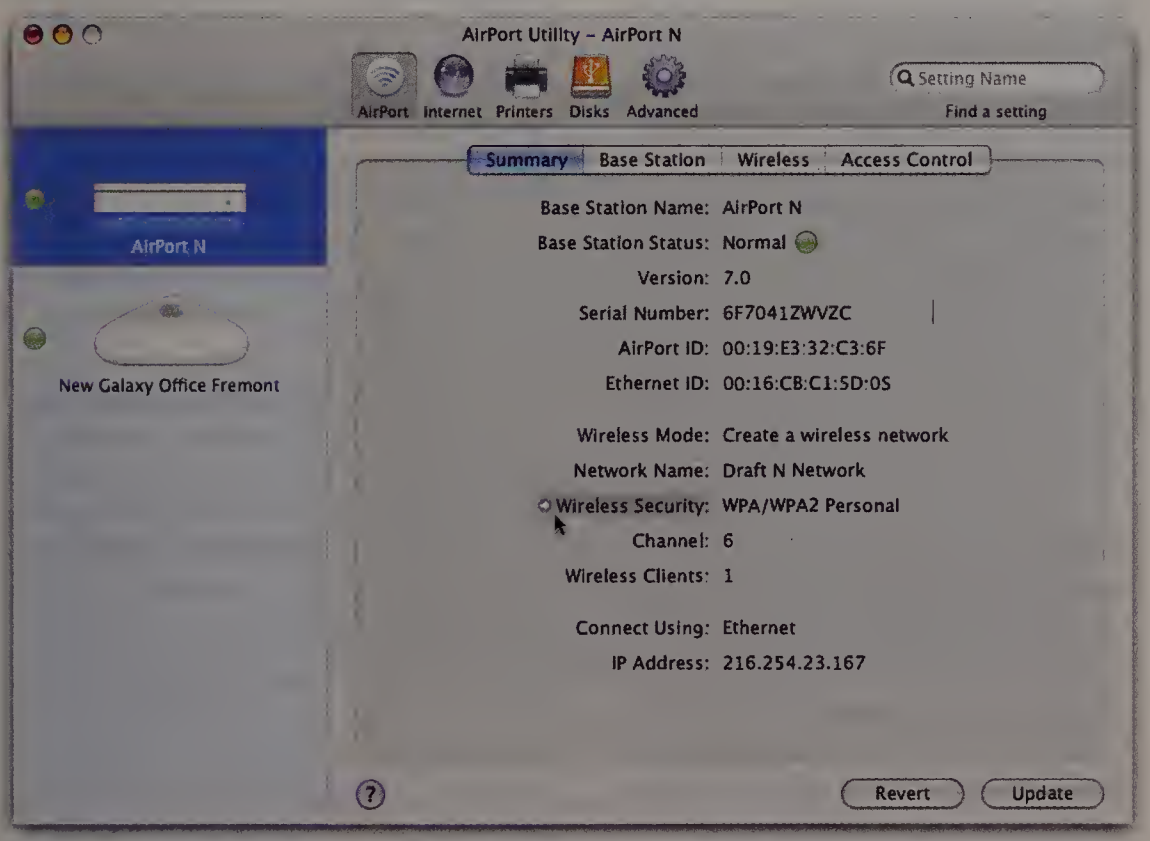
AirPort Utility also makes troubleshooting much easier by adding a display of configuration problems and tools to fix those errors in the manual setup Summary tab. Each tab element, such as the Base Station's channel or network setup, offers a live link to the appropriate setting within the program.

AirPort Extreme now supports the newer WPA (Wi-Fi Protected Access) and WPA2 encryption methods for both personal and corporate networks, as well as older WEP (Wired Equivalent Privacy) encryption. WEP, widely considered a broken method, is handled with the WEP Transitional networking standard, which allows the mixing of WEP, WPA, and WPA2 on the same network.

Sharing Printers and Drives

Home users and small businesses will find the ability to add and control access to one or more hard drives connected via USB (or via a separately purchased USB hub) a much less expensive option than many of the alternatives, such as using a dedicated NAS (network-attached storage) drive or using a dedicated computer as a file server. And although other gateways let you connect a hard drive, Apple's is the only one that supports both the Mac-native Hierarchical File System Plus drive format and Apple's Personal File Sharing protocol.

A few rough edges remain in the new Base Station. AirPort Utility doesn't always remember Base Station administrative access passwords or encryption keys when you change settings. And in our tests, the utility—not the Base Station—crashed many times during normal operation. However, since 802.11n is in flux, expect several updates and bug fixes in the near future.



Easy Troubleshooting A Summary tab in AirPort Utility's manual setup shows settings and lets you quickly make changes to them.

Macworld's Buying Advice

Apple's new AirPort Extreme Base Station may have been a long time coming, but it has been worth the wait for anyone whose network needs either greater speed or longer-distance operation. While less expensive 802.11n gateways are already on the market, none match Apple's for features or ease of setup. Apple just has to step up to the plate and add Gigabit Ethernet to fulfill this speed demon's potential. (For a longer version of this review, see macworld.com/2370).

Glenn Fleishman writes daily about wireless networking at his site, Wi-Fi Networking News.

macworld.com/reviews

What we're reviewing online this month

FIND IT ONLINE For longer reviews, type the blue URL at the end of each summary into your browser's address window.

SOFTWARE

Aperture 1.5.2 △

RATING: ♦♦♦♦ **PRICE:** $299; upgrade, free **COMPANY:** Apple **URL:** www.apple.com

With version 1.5.2, Aperture, Apple's professional photographic workflow and management software, has hit its stride. Apple did a commendable job of listening to users' requests and complaints—it delivered seven updates within 12 months. While there's room for Aperture to grow, version 1.5.2 brings it ever closer to fulfilling its promise as the start-to-finish, import-to-output hub of an advanced photographer's workflow. Serious digital photographers should give it a look (macworld.com/2579).

Cinematize 2 Pro △

RATING: ♦♦♦♦½ **PRICE:** $150 **COMPANY:** Miraizon **URL:** www.miraizon.com

Cinematize 2 Pro, by Miraizon, is designed to extract discrete sections from unencrypted DVDs. This new Pro version gives you many more options for extracting video and audio. You can extract menu items (images and video that appear on a DVD's navigation menus), movie footage, and subtitles. The program lets you extract audio with a high degree of specificity; you can even split out multiple audio streams if needed. Video editors who need access to all the content on their DVDs can more than justify the cost of this useful application (macworld.com/2580).

FizzBall △

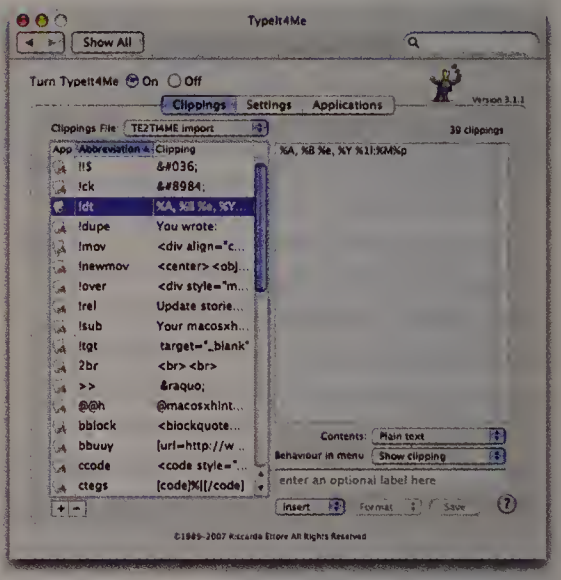
RATING: ♦♦♦♦♦ **PRICE:** $20 **COMPANY:** Grubby Games **URL:** www.grubbygames.com

FizzBall, an adorable shareware action game, is fun for the whole family. The game features Professor Fizzwizzle, who is on a mission to save hungry animals from an archipelago. Something has frightened the animals' caretakers away, and it's up to you and the professor to save them. FizzBall automatically saves between levels, so you can resume playing wherever you leave off. You can also share high scores with other FizzBall players online. The game's settings offer control over sound and music volume, mouse sensitivity, kids' screens, special effects, and screen size (macworld.com/2581).

StuffIt Deluxe 11.0.2

RATING: ♦♦♦♦½ **PRICE:** $80 **COMPANY:** Smith-Micro Software **URL:** www.stuffit.com

If you've ever double-clicked on a .sit file to extract its content, then you're familiar with StuffIt. This popular compression and archiving utility has been around since 1987. The new StuffIt Deluxe 11.0.2, at $80, offers a variety of new features and enhancements, such as optimized performance on Intel Macs, very good JPEG file compression, and new utilities that let you easily navigate through your archives. StuffIt's handy archive manager displays a list of all the archives on your hard drive, giving you an organized, accessible collection. This is an impressive upgrade of a very mature product (macworld.com/2501).



TypeIt4Me 3.1.1 △

RATING: ♦♦♦♦½ **PRICE:** $27 **COMPANY:** Ettore Software **URL:** ettoresoftware.com

Typing the same thing over and over is not only tedious, but also a waste of time, and doing so can lead to errors. Enter TypeIt4Me 3.1.1, a utility that's been around in some form since 1989. Think of TypeIt4Me as an intelligent typing assistant. It sits silently in the background and monitors every keystroke. When it sees a key sequence you've previously defined, it replaces that sequence with the assigned text. New in version 3.1.1 is the ability to create abbreviations that are actually executed as AppleScript code. If you type a lot, you owe it to your fingers to give TypeIt4Me a try (macworld.com/2582).

HARDWARE

iCast

RATING: ♦♦♦♦ **PRICE:** $299 **COMPANY:** Soundcast **URL:** www.soundcastsystems.com

If you want to transmit your iPod's audio from one part of your house to another, the iCast system is a solid option. Consisting of a transmitter with a built-in iPod dock cradle and a similar-looking receiver that connects to your home stereo or powered speakers, the iCast system uses 2.4GHz RF (radio-frequency) technology to send your iPod's audio through walls and across a home—even a large one. The system provides clear sound quality with little to no interference, even in the presence of other 2.4GHz RF devices. Your iPod charges while docked, and the unit's standard audio-input jack lets you transmit audio from other devices when your iPod is elsewhere (macworld.com/2583).

iMainGo

RATING: ♦♦♦♦ **PRICE:** $70 **COMPANY:** Portable Sound Laboratories **URL:** www.imaingo.com

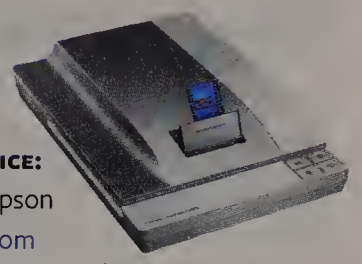
We find most speaker cases unimpressive, but the iMainGo is an exception. One side of the hard-shell case hosts a digital amplifier and two speakers; the other side holds your iPod securely in a padded compartment. When the case is closed, a clear, flexible window lets you view your iPod's screen and access its controls. Although the iMainGo doesn't have some of the features that more expensive speakers do, and taking your iPod out and putting it in the case can be inconvenient, this portable speaker system is sturdy and protective, with surprisingly good sound quality for its size (macworld.com/2584).

Myvu Personal Media Viewer

RATING: ♦♦♦♦ **PRICE:** $300 **COMPANY:** MicroOptical **URL:** www.myvu.com

Myvu's Personal Media Viewer, a set of goggles for the 5G iPod, is a well-designed way to view your video on the go (and on a seemingly larger screen than the iPod's own). A battery pack offers additional run time, and the visor lets you see above, below, and through the video goggles, providing some degree of awareness of your surrounding environment. All that's missing is protection for your iPod's screen. Wearing the visor may take a bit of getting used to, but the Myvu combines form and functionality in an easy-to-use package (macworld.com/2585).

Perfection V350 Photo



RATING: ♦♦♦♦ **PRICE:** $150 **COMPANY:** Epson **URL:** www.epson.com

The Perfection V350 Photo is a swift, easy-to-use, flatbed scanner that produces pleasing and colorful images. Though its transparency scans lack some detail, the V350's ability to load and scan filmstrips automatically is a convenient feature that expedites the process of digitizing old photos (macworld.com/2586).

Phaser 6115MFP/N

RATING: ♦♦♦½ **PRICE:** $799 **COMPANY:** Xerox **URL:** www.xerox.com

The Phaser 6115MFP/N is a fast all-in-one network-compatible color laser printer that can scan, fax, and copy. This multifunction printer would be a solid all-around performer if it weren't for its quirky built-in scanner, which produced erratic results during our testing (macworld.com/2587).

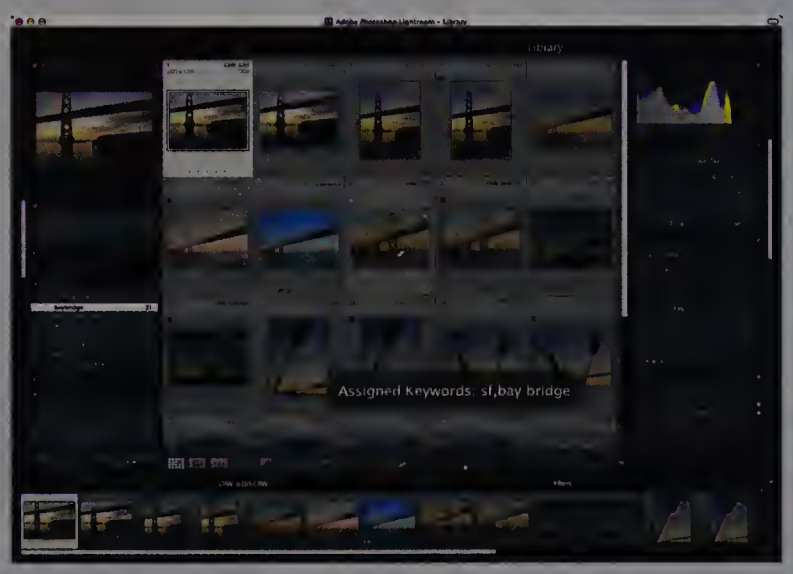
VX2245wm ViewDock

RATING: ♦♦♦ **PRICE:** $455 **COMPANY:** ViewSonic **URL:** www.viewsonic.com

The idea of an affordable multifunction display that has built-in speakers, an iPod dock, a camera-card reader, and a USB hub is very appealing. The 22-inch wide-screen ViewSonic VX2245wm is reasonably priced and packed with features, but its method of integrating them is confusing. What's more, the display suffers from a limited viewing angle (macworld.com/2588).

Digital Light Table

Photoshop Lightroom 1.0



RATING: ♦♦♦♦ **PRICE:** $299; $199 until April 30 **COMPANY:** Adobe **URL:** www.adobe.com

Photoshop Lightroom 1.0, a brand-new photographic workflow tool that combines image editing and photo management with the ability to produce slide shows, high-quality prints, and Web portfolios, has come out after a year in public beta. Adobe designed Lightroom as a professional product that also appeals to serious amateur photographers. It's a feature-rich and powerful tool, even in its version-1.0 state. While the program has a few glitches and anomalies, they are mostly minor and do little to detract from Lightroom's impressive debut (macworld.com/2589).

Top Products

Your guide to the best hardware we've tested. See more at macworld.com/reviews.

Color Laser Printer

C6100dn

RATING: 4½ **PRICE:** $1,102 **COMPANY:** Oki Data **URL:** www.okidata.com

The Oki C6100dn produces great-looking prints, and it includes built-in duplexing. It has easy network connectivity and quick printing speeds (macworld.com/1670).

Ink-Jet Photo Printer

Photosmart Pro B9180

RATING: 4½ **PRICE:** $700 **COMPANY:** Hewlett-Packard **URL:** www.hp.com

Equipped with a color calibrator and pigment-based inks, the Photosmart Pro B9180 produces the best photos we've seen out of all the HP printers we've tested (macworld.com/2561).

Multifunction Ink-Jet

Photosmart C7180

RATING: 4 **PRICE:** $400 **COMPANY:** Hewlett-Packard **URL:** www.hp.com

The HP Photosmart C7180's features, connection options, and solid print and scan quality make it a fine fit for people who want a good all-around color ink-jet MFP (macworld.com/2475).

Multifunction Laser

AcuLaser CX11NF

RATING: 4 **PRICE:** $800 **COMPANY:** Epson **URL:** www.epson.com

This device has it all: it's a color laser printer, a sheet-fed scanner, a copier with networking capabilities, and a fax machine (macworld.com/1669).

MACS

PRODUCT	PROCESSOR	DISPLAY	RATING	FIND CODE[A]	BEST PRICE[B]	SPEEDMARK 4-5 SCORE[C]
DESKTOP						
iMac	Intel Core 2 Duo/1.83GHz	17 inches	4	1727	$963	202
	Intel Core 2 Duo/2GHz	17 inches	4½	1728	$1,119	232
	Intel Core 2 Duo/2.16GHz	20 inches	4½	1729	$1,439	245
	Intel Core 2 Duo/2.16GHz	24 inches	4½	1730	$1,856	245
Mac mini	Intel Core Duo/1.66GHz	not included	4	1731	$573	152
	Intel Core Duo/1.83GHz	not included	4	1732	$771	165
Mac Pro	Intel Xeon/ two dual-core 2.66GHz	not included	4	2489	$2,274	299
PORTABLE						
MacBook	Intel Core 2 Duo/1.83GHz	13 inches	4½	2387	$1,029	168
	Intel Core 2 Duo/2GHz	13 inches	4½	2388	$1,225	178
	Intel Core 2 Duo/2GHz (black)	13 inches	4½	2389	$1,395	173
MacBook Pro	Intel Core 2 Duo/2.16GHz	15 inches	4½	2340	$1,819	209
	Intel Core 2 Duo/2.33GHz	15 inches	4½	2341	$2,266	226
	Intel Core 2 Duo/2.33GHz	17 inches	4	2342	$2,498	211

[A] Typing in find codes after macworld.com/ directs you to a product's review or overview. For example: macworld.com/2489 contains an overview for the 2.66GHz Mac Pro. [B] From a PriceGrabber survey of retailers as of March 7, 2007. [C] Speedmark 4.5 is Macworld Lab's standard test tool for benchmarking systems running Mac OS X 10.4 (Tiger). For information on Speedmark testing, go to www.macworld.com/speedmark.

Compact Photo Printer

PictureMate Flash PM 280

RATING: 4 **PRICE:** $300 **COMPANY:** Epson **URL:** www.epson.com

The PictureMate Flash PM 280 offers the best-looking 4-by-6-inch borderless photos of all the portable photo printers we've tested, and it prints them faster (macworld.com/2396).

Digital SLR

Digital Rebel XT

RATING: 4½ **PRICE:** $899; with lens, $999 **COMPANY:** Canon **URL:** www.canon.com

Top Products are those we've recently reviewed in a comparison of like products. As new products become available, we'll update the list. For longer reviews of these products and for other product recommendations, go to macworld.com/reviews. All prices are as rated. For the best current prices, go to macworld.pricegrabber.com. All products were available as of February 19, 2007.

The Digital Rebel XT's feature set, image quality, and price, combined with the vast assortment of available Canon mount lenses, make it the best choice in the sub-$1,000 digital SLR market (macworld.com/0535).

Digital Camera

FinePix E900

RATING: ♦♦♦♦
PRICE: $410
COMPANY: Fujifilm
URL: www.fujifilm.com

The 9-megapixel FinePix E900 produces attractive images, with vivid, accurate colors and exposures, in a variety of lighting situations (macworld.com/1523).

MiniDV Camcorder

PV-GS500

RATING: ♦♦♦♦
PRICE: $1,000
COMPANY: Panasonic
URL: www.panasonic.com

The PV-GS500 is a fine piece of equipment: it offers great control, excellent video quality, and broad operational flexibility (macworld.com/1673).

Flatbed Scanner

Perfection V700 Photo

RATING: ♦♦♦♦
PRICE: $550
COMPANY: Epson
URL: www.epson.com

The Perfection V700 Photo is a fine choice for people looking for a midrange scanner for both photos and high-resolution transparencies (macworld.com/1519).

Large LCD Monitor

LP2465

RATING: ♦♦♦♦
PRICE: $799
COMPANY: Hewlett-Packard
URL: www.hp.com

The LP2465 is an affordable and flexible 24-inch desktop LCD with a 16:10 wide-screen aspect ratio that immediately makes one think of the cinema (macworld.com/2508).

Medium LCD Monitor

MultiSync 2190UXi

RATING: ♦♦♦♦½
PRICE: $1,500
COMPANY: NEC
URL: www.necdisplay.com

This 21-inch display doesn't come cheap, but graphics pros will love the NEC MultiSync 2190UXi's vivid and accurate colors and wide viewing angle (macworld.com/1445).

Desktop FireWire Drive

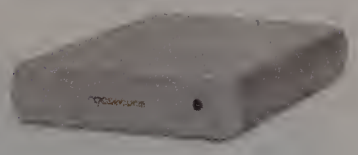
G-Drive Q 500GB

RATING: ♦♦♦♦♦
PRICE: $559
COMPANY: G-Technology
URL: www.g-technology.com

The G-Drive Q SATA hard drive has nearly every type of connection you could want. It operates without a fan, so it's very quiet—you hear only the occasional spin of the drive (macworld.com/1622).

Portable FireWire Drive

Rocbit 2B

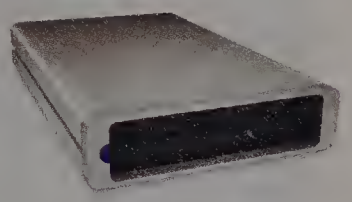


RATING: ♦♦♦♦♦
PRICE: $230
COMPANY: Rocsecure **URL:** www.rocsecure.com

The Rocbit 2B, with 40-bit encryption, is well worth its cost if security is a concern (macworld.com/1443).

Dual-Layer DVD Burner

d2 DVD+/–RW with LightScribe



RATING: ♦♦♦♦½
PRICE: $189
COMPANY: LaCie
URL: www.lacie.com

The LaCie d2 is one of the newest and fastest drives for burning DVDs, and it features LightScribe, a cool disc-labeling technology (macworld.com/2263).

iPODS

PRODUCT	CAPACITY	RATING	BEST PRICE[A]	DISPLAY	BATTERY LIFE	MEDIA SUPPORTED	FIND CODE[B]
iPod	30GB	♦♦♦♦½	$208	2.5-inch color	14 hours of music playback; 4 hours of slide shows with music; 3.5 hours of video playback	Music, photos, album art, video, games	2233
iPod	80GB	♦♦♦♦½	$324	2.5-inch color	20 hours of music playback; 6 hours of slide shows with music; 6.5 hours of video playback	Music, photos, album art, video, games	2234
iPod nano	2GB	♦♦♦♦½	$110	1.5-inch color	24 hours of music playback; 5 hours of slide shows with music	Music, photos, album art	2235
iPod nano	4GB	♦♦♦♦½	$160	1.5-inch color	24 hours of music playback; 5 hours of slide shows with music	Music, photos, album art	2236
iPod nano	8GB	♦♦♦♦½	$210	1.5-inch color	24 hours of music playback; 5 hours of slide shows with music	Music, photos, album art	2237
iPod shuffle	1GB	♦♦♦♦	$69	N/A	12 hours of music playback	Music	2238

[A] From a PriceGrabber survey of retailers as of March 7, 2007. [B] Typing in find codes after macworld.com/ directs you to a product's review or overview. For example: macworld.com/2233 contains an overview for the 30GB video iPod.

Mac Gems

Get more and expanded reviews at macworld.com/macgems **BY DAN FRAKES**

Viewing Desktop Photos ImageViewerCMPlugIn displays images at nearly full-screen size.

GRAPHICS

ImageViewer-CMPlugIn 2.3.2

RATING: ♦♦♦♦ **PRICE:** $10 **COMPANY:** AstroK Software **URL:** macworld.com/2592

Back in 2003, I covered Pixture Studio's QuickImageCM, a contextual-menu plug-in for the Finder that lets you quickly and easily view photos and images—for example, when you have mystery images on your desktop, or when you've just downloaded a bunch of photos from your digital camera. Unfortunately, QuickImageCM hasn't yet been updated to work on Intel Macs.

Luckily, Intel Mac users have AstroK Software's ImageViewerCMPlugIn 2.3.2, which works similarly to QuickImageCM: in the Finder, you simply right-click (or control-click if you've got a single-button mouse) on any image file and choose View Pictures from the resulting contextual menu. ImageViewerCMPlugIn takes over your screen, displaying the selected image at nearly full-screen size.

In addition, the left side of the screen contains thumbnails for all the *other* images in the same folder, as well as images in subfolders; click on any thumbnail to view that image. (However, the display doesn't indicate the subfolders in which images reside.) If you want to view only some images in a folder—for example, if you've got 50 photos and want to view only 10—you can select just those photos and ImageViewerCMPlugIn will limit its display to them. ImageViewerCMPlugIn supports a wide variety of image formats, including BMP, EPS, GIF, JPEG, Illustrator, PDF, PSD, PNG, Raw, and TIFF.

There is a customizable toolbar that provides options for zooming and rotating an image, as well as for deleting it or opening it in a separate image-editing application (for example, Lemkesoft Graphic Converter or Adobe Photoshop). There's also a slide-show mode, and you can view Finder and EXIF information for photos.

ImageViewerCMPlugIn also includes a feature for sorting your photos. You can configure up to nine destination folders for your photos, and then assign each folder a number. While you view an image, you can press the corresponding number on your keyboard to assign it to a folder. When you exit ImageViewerCMPlugIn's viewer, all the images you've assigned to different folders will automatically be moved to those folders. And when you install ImageViewerCMPlugIn, you also get a useful Automator action that lets you access the utility's image-viewing features from within an Automator workflow.

ImageViewerCMPlugIn doesn't have the editing features found in QuickImageCM—which lets you crop, scale, convert, and even apply filters to images—but it's a better viewer and sorter. And it works on Intel Macs. If you liked QuickImageCM, or even the Finder's built-in Slideshow feature, give ImageViewerCMPlugIn a try.

WEB

CaminoSession 1.0

RATING: ♦♦♦♦ **PRICE:** payment requested **COMPANY:** Ben Willmore **URL:** macworld.com/2591

It's frustrating to lose the open tabs in a browser window you've accidentally closed. If you're a Safari user, Obsessive Compulsive Development's add-on Taboo (♦♦♦½; macworld.com/2594) can display a warning when you try to close a window with multiple tabs or when you try to quit Safari while a tabbed window is open. Jim Fowler's Forget-MeNot (♦♦♦♦; macworld.com/2593) is even more practical; if you quit Safari with multiple tabs open, those windows

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Wanted for triggering productivity, creativity, and unprecedented levels of organization.

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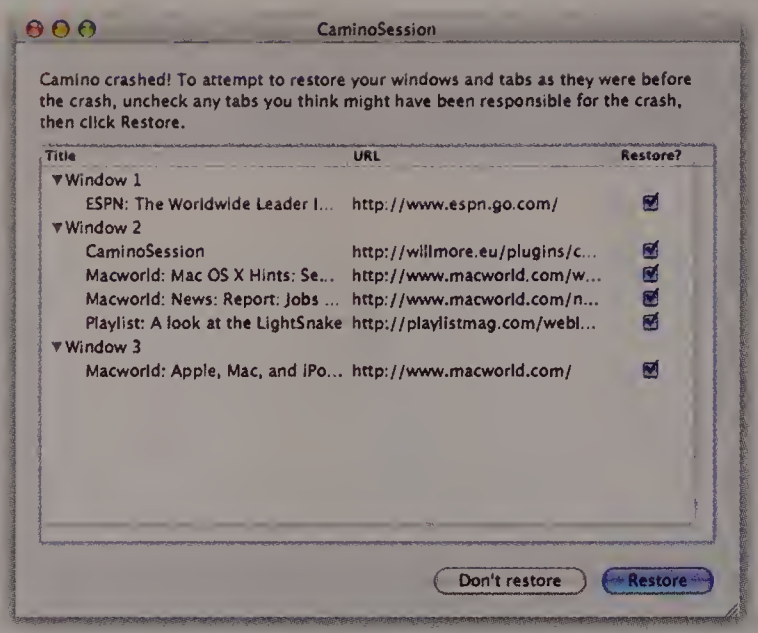

Save Tabbed Windows CaminoSession keeps track of Camino tabs, even if a rogue site takes the browser down.

and tabs are all restored the next time you launch Safari.

But what if you're using Camino? A multiple-tab warning is built into the browser, but many people have asked for a way to get tab-saving goodness like ForgetMeNot's. The solution is CaminoSession 1.0. After you've installed CaminoSession, launching Camino will automatically open all the tabs and windows that were open the last time you quit the browser.

Even better, CaminoSession protects you if Camino crashes: when you launch the browser after a crash, you'll get a handy dialog box that lists all the windows and tabs open at the time of the crash. You can choose which ones to restore—if you think a particular Web site was responsible for the crash, you can opt not to open it.

You could get similar features in another browser, but if you prefer Camino, CaminoSession is a must-have. (CaminoSession doesn't work with the current betas of the upcoming Camino 1.1, since that version includes its own session-saving feature.)

iTUNES

CoverSutra 1.0

RATING: ♦♦♦♦ **PRICE:** €10 (about $13)
COMPANY: Sophiestication Software **URL:** macworld.com/2595

For the past few years, Wincent Colaiuta's Synergy (♦♦♦♦♦; macworld.com/2628) has been my favorite way to control iTunes without actually switching to iTunes. I've tried most of the many similar utilities out there, and I think that Synergy has the best combination of features, interface, and ease of use.

But I recently found another iTunes controller that's battling for time on my Macs: Sophiestication Software's CoverSutra 1.0. Though it can't compete with Synergy in terms of features, it's simple and attractive—and, well, it's kind of fun.

Like Synergy, CoverSutra lets you assign keyboard shortcuts to common iTunes actions. I use these shortcuts to control iTunes most of the time—I rarely bring iTunes to the front.

Pressing a CoverSutra keyboard shortcut results in on-screen feedback. And whenever the track changes, you see a display that looks just like a CD jewel case. It shows the current track's title and album art (if there is any—if there's no album art, CoverSutra displays a generic CD case with the artist and album names on it). You can enable a similar, always-showing CD-case display and place it anywhere on your screen.

My favorite CoverSutra feature is its on-screen control window. Press a keyboard shortcut (mine is ⌘-F9) or choose Show Player Controls from the optional CoverSutra menu, and you get a translucent, movable, and resizable control window. Like Synergy's informational display, this window shows the current track's album art, album and song titles, artist name, and rating. But you also get play/pause, forward, back, shuffle, repeat, and volume controls, as well as a progress slider, just like iTunes', that you can use to quickly skip to any point in a track. You can click on any rating star to give the current track that rating. And the window automatically fades away when you click anywhere else on screen (or you can manually close it).

If you have an Apple Remote–compatible Mac (a recent Mac laptop, iMac, or Mac mini), CoverSutra lets you use the remote to control playback, even when iTunes is in the background. (The Apple Remote works with iTunes only if iTunes is the frontmost application.)

The CoverSutra menu-bar menu gives you quick access to several settings and recently played tracks. My favorite setting here is the Disable Shortcuts command, which lets you temporarily disable CoverSutra's keyboard shortcuts if you're using another application that happens to use the same shortcuts.

As you might expect from an initial release, CoverSutra 1.0 has a few rough edges. For example, the Help menu item doesn't actually give you any help, and quitting CoverSutra clears the list of recent songs. Still, CoverSutra has a great interface and is easy (and fun) to use. Recently, I've been using it exclusively—and if its developers add a few more features, Cover-Sutra has a chance at replacing Synergy on my Macs.

Dan Frakes is a senior editor at *Macworld* and the senior reviews editor at Playlistmag.com. Send your thoughts on this column, or on things you'd like to see in future columns, to macgems@macworld.com.

Easier iTunes Adjustments CoverSutra gives you on-screen and keyboard control of iTunes—without making you switch to iTunes.

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4 Ways to Windows

Find the best software for running Windows on your Mac

When Apple introduced its first Intel-powered Macs in early 2006, the company did more than just launch OS X on a new platform. It also gave Mac users a brand-new way to run Windows apps.

Eighteen months ago, Mac users who had to run Windows software used Virtual PC—and nobody really liked it. Today, we have a bunch of alternatives, with four that really rise to the top: Parallels Desktop for Mac and VMWare Fusion, which both let you install and run a copy of Windows from within OS X; CodeWeavers' CrossOver Mac, which tricks Windows apps into thinking you've got Windows installed when you really don't; and Apple's own Boot Camp, which lets you choose to boot into Windows or OS X when you start your Mac.

But those four choices lead to one big question: which one is right for you? What follows is a comparison of the four, as well as a critical look at how easy each one is to install and configure, how well each runs Windows software, and how well each supports hardware peripherals.

By Rob Griffiths | Illustrations by Jack Gallagher

THIS WAY TO
WINDOWS

As you read, bear in mind that this market is constantly evolving. During our evaluation, both Apple's Boot Camp and VMWare's Fusion were still in public beta, Parallels' latest release had just emerged from beta, and CrossOver had only recently been released. I used the most up-to-date version of each program available at the time I was testing, but some of the details may be out of date by the time you read this.

Also keep in mind that it'd be impossible for us to do full compatibility testing for every version of Windows, every application, and every hardware peripheral on the Mac market. I chose to focus our software compatibility assessments on Microsoft Windows XP Pro Service Pack 2 (with all the latest updates) and Office XP Pro (2002). Unless specified otherwise, I tested each product on a 15-inch 2.33GHz MacBook Pro with 2GB of RAM.

Hardware Requirements

To use any of the following software, you'll obviously need an Intel-powered Mac; none of these programs run on a PowerPC Mac.

CPU The faster your CPU, the better your performance will be. None of these programs are disappointing in terms of speed. I ran them through some timed tests (see "How They Compare: Virtualization Software") and some less formal evaluations (using them for everyday computing chores and comparing the feel to native OS X apps). My conclusion: Macs run Windows quite nicely in virtualization mode, and very well when booted natively into Windows. (To be more specific, they run Windows XP quite nicely; Vista is another story. For more on that, see "Which Windows?")

But even on a Core Duo mini, these programs all offer performance that's worlds better than Virtual PC ever was on a PowerPC Mac. For typical Office applications, even a Mac mini will provide performance that's more than acceptable. The main exception: if you want to use Boot Camp to run Windows games that require 3-D acceleration, you'll want a more powerful machine; the mini and the MacBook lack the graphics hardware required for 3-D–accelerated video games.

RAM You'll also want a lot of RAM. In my testing, with Windows loaded and Word and Excel files open, CrossOver and Fusion used between 45MB and 60MB of real memory; Parallels used more than 100MB. By comparison, running Windows natively in Boot Camp with the same Excel and Word files open required almost 200MB. As you open more programs, and especially if you're using OS X apps at the same time, your RAM requirements will go up. For Windows 2000 and XP, 2GB is a good starting point; you'll need more if you're considering running Vista.

Extras You'll also need to be careful about the kinds of peripherals you have connected to your Mac. These programs can vary widely in their support for FireWire, USB, and Bluetooth. If any of your Windows apps require such peripherals, see "How They Compare: Virtualization Software" to find out about compatibility.

Who They're Good For So which of these four alternatives is right for you? Not surprisingly, the answer really depends on what you need. For most Mac users, Parallels will let you do what you need to do in Windows with the least amount of trouble. Tinkerers and hobbyists will love Fusion's downloadable appliances. Those who don't need anything but the occasional Windows Office application can probably get by with CrossOver. For others—gamers, people with esoteric hardware needs, and people who pound their CPUs at 100 percent utilization—Boot Camp is the preferred route. The bottom line: we've come a long way from Virtual PC.

How They Compare: Virtualization Software

	Parallels Desktop	VMWare Fusion	CrossOver Mac	Boot Camp
Windows versions supported	3.11, 95, 98, ME, NT, 2000, XP, Vista	3.1, 95, 98, ME, NT, 2000, XP, Vista, Windows Server	98, 2000, XP[D]	XP, Vista
Other operating systems supported	FreeBSD, Linux, MS-DOS, OS/2, Solaris	FreeBSD, Linux, MS-DOS, Novell Netware, Solaris	none	none
64-bit support	○	●	○	○
Drag and drop files between Windows and OS X	●	●	○	○
Performance: scroll Word document (seconds)[A]	9.9	12.6	17.5	14.5
USB support	Good	Fair	Poor	Good
Bluetooth support	Poor	Good	Poor	Good
FireWire support	Poor	Poor	Fair	Good
3-D acceleration	○	●[C]	●	●
Utilizes both cores in Core Duo chips	○	●	○	●
Memory usage[B]	105MB–115MB	50MB–60MB	45MB–55MB	194MB

● = yes. ○ = no. [A] Scrolling through a 3.9MB document with many images in Page Layout mode, using 125 percent zoom; by comparison, running the same test in Mac-native Microsoft Word 2004 on a MacBook Pro took 12.4 seconds. [B] With a large Word document and an Excel file open. [C] Experimental. [D] Apps that run on those operating systems, not the operating systems themselves.

Parallels
Multi-OS Powerhouse

Parallels (★★★★½; macworld.com/2598) came out in beta form in April of last year, not long after Apple released the first Intel Macs. Since then, the software has been greatly improved through a seemingly constant stream of betas, release candidates, and officially released updates. (This article is based on build 3170, Release Candidate 3; Parallels says that there are no substantial differences between that build and the official release, beyond some bug fixes.) Today, this $80 program is the most-refined option for running a full Windows installation next to OS X on an Intel Mac. (Parallels also supports nearly any non-Apple operating system you can think of, from Windows 3.11 through Vista, Linux, FreeBSD, OS/2, Solaris, and even good old MS-DOS).

Installation

Parallels has accomplished something amazing: it's made it simpler to install Windows inside a virtual machine on a Mac than it is to install Windows on a "real" PC. Using the Windows Express setup assistant, you can install Windows XP or Vista in a couple of mouse clicks. You type your product key, name, and organization on one screen, and then Parallels takes over. Anywhere you'd typically have to interact with the Windows installer, Parallels does the job for you.

After installing Windows, you launch your new virtual machine and run the Parallels Tools installer (in the Action menu). Parallels Tools adds a number of features that ease the integration of Windows with OS X, such as the ability to move your mouse seamlessly from Parallels to Mac OS X and back again.

The process is just a bit more complicated if you want to install other operating systems. You use File: New to open the OS Installation Assistant, and tell it to create a Custom virtual machine. On the next screen, you select the type of OS (Linux, OS/2, and so on), as well as the specific version (Red Hat Linux, OS/2 Warp 4, and so on) you want to install. You'll then have to specify a memory allocation and drive-space setup for your virtual machine, and then start the installation—you can install from CDs or from a disk image.

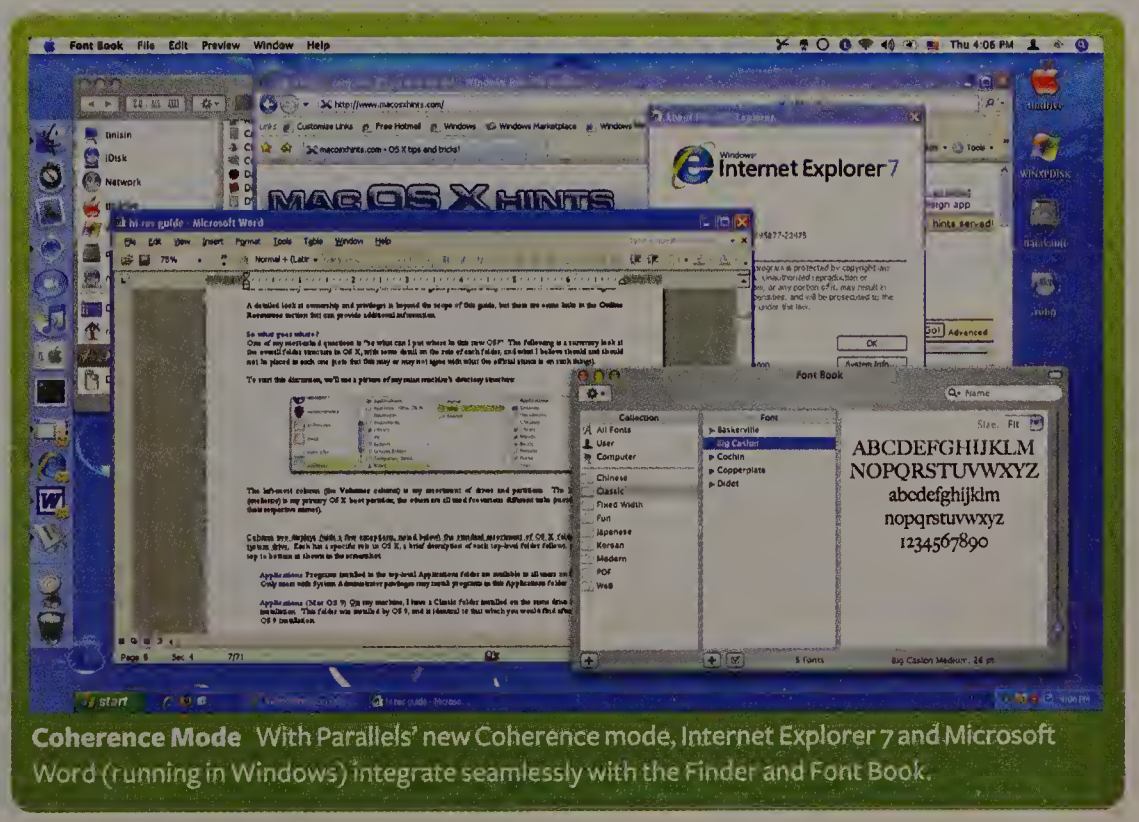
Software Support

Assuming that you're using Parallels to run Windows, you'll want to check out Parallels' Coherence mode as soon as you can (see "Coherence Mode"). It's a way of configuring Parallels so the Windows OS itself is hidden: all you see is an application window—which happens to belong to a Windows application—on your OS X desktop. Those apps have their own resizable windows, their icons appear in OS X's Dock, and the Windows taskbar is present along the bottom of the screen (though you can drag it to any edge, just as you can when running Windows natively). When running Parallels in Coherence mode, it's easy to forget you're even running the Windows OS; it's more like you're running programs that don't look like the rest of your OS X apps.

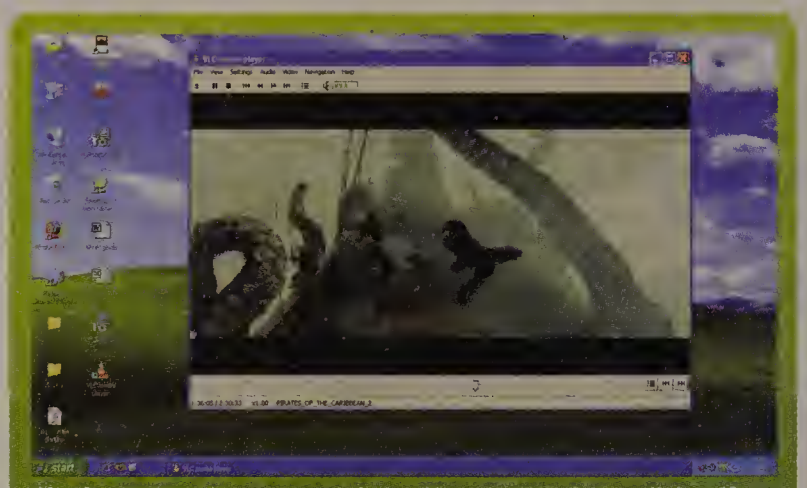
Further easing integration, Parallels supports full drag and drop between the Windows and OS X environments. You can copy a folder of files from one environment to the other, add items to the taskbar in Coherence mode, and even drop documents onto Windows' application windows.

At the other extreme, you can make your Mac look like it's solely a Windows machine simply by switching to full-screen mode. In full-screen mode, the Mac OS is completely hidden. When you want to get back to your native OS, just press option-return and you're back in windowed mode.

In addition to creating this OS transparency, Parallels runs Windows apps amazingly well. It will run nearly any Windows program you throw at it, with performance that's nearly as good as you'd get on a similarly configured native



Coherence Mode With Parallels' new Coherence mode, Internet Explorer 7 and Microsoft Word (running in Windows) integrate seamlessly with the Finder and Font Book.



Playing DVDs You can watch (and burn) DVDs in Parallels—if you use VLC and don't mind a little stuttering. The Windows Media Player complained about a missing codec.

Windows box. (You can also run Windows XP from a Boot Camp partition—meaning that you need only one copy of Windows XP.) I say *nearly* because Parallels can't yet utilize both cores in the Core Duo chips. So if you're running an application that's particularly CPU-intensive, it'll take a bit of a performance hit. Also, Parallels doesn't yet offer accelerated graphics, so many games are out of the question. And Parallels won't run 64-bit Windows, but that'll be a problem for only a small subset of users.

For everything else, such as Microsoft Office, Quicken QuickBooks, Adobe Photoshop, and pretty much any other application I tested, Parallels works, and works well. Performance is nice and snappy—in fact, it's the snappiest of the four programs I tested (see "How They Compare: Virtualization Software"). Even playing back DVDs works reasonably well. I wasn't able to get Windows Media Player to work (it kept telling me I needed an MPEG-2 codec), but I was able to use the free VLC video player (www.videolan.org/vlc) to play *Pirates of the Caribbean 2* (see "Playing DVDs"). There was some stuttering of the sound and the occasional mild picture hiccup, but overall, the experience was much better than I was expecting.

Hardware Support

When Parallels first came out, its support for USB devices wasn't great. Things have improved since then. It now supports USB 2.0, and more devices work. I had no trouble getting Windows XP Pro to recognize a 1GB memory stick; USB hard drives work, too. I was even able to use my Wacom Intuos 2 graphics tablet. You may still run into problems with things such as USB dongles, which some programs use for copy protection, but most other USB devices should work just fine.

Networking support is good; I had no issues printing to a networked laser printer, and I was able to see the other Macs on the household network.

What hardware won't work with Parallels? Pretty much anything that connects via FireWire, Bluetooth, or ExpressCard. (The main exception is FireWire drives that have been mounted in OS X.) If you have peripherals that rely on these technologies and that need access to them in Windows, you should consider using Boot Camp. Also, Parallels can't take advantage of both cores on Core Duo chips. In my experience, that didn't interfere with performance much, but if you have processor-intensive Windows apps, it might.

Who It's Good For

With its excellent application support, well-integrated Coherence mode, drag-and-drop capabilities, and overall level of performance, Parallels is a great match for people who need to run the full Windows OS on their Macs—or people who'd like to experiment with other operating systems, such as Linux. But if you need accelerated 3-D graphics support or have FireWire and Bluetooth devices you need to use in Windows, look to Boot Camp.

PARALLELS DESKTOP FOR MAC

PROS: Coherence mode; drag and drop files from one OS to another; excellent performance; very good hardware support.

CONS: Virtually no FireWire or Bluetooth support; no accelerated graphics; doesn't utilize both cores in Core Duo chips; no 64-bit Windows support.

PRICE: $80

COMPANY: Parallels, www.parallels.com

The Security Question

Is Windows really unsafe?

At one point during my research for this article, I ran Parallels on my Mac Pro for the first time in a while. I wanted to tweak the virtual machine's settings, which requires shutting it down. Before I could do so, Windows XP informed me it was installing a few updates. (I have the automatic update enabled.) Eventually, the updates were applied and the virtual machine shut down. I tweaked my Parallels settings and restarted the virtual machine. When XP finished booting up, I was surprised to see Windows' built-in malware detector pop up on screen.

Somehow, my virtual Windows XP installation had been infected by a member of the rbot family of malicious software. Thankfully, Windows found and removed this hack all by itself.

I hadn't done much more than surf the Net and run some Office applications on that particular machine. It's certainly possible that I visited a malicious Web page. Or maybe someone had sniffed out my machine from the Net and attacked it remotely.

But I still have no clue how my Windows XP installation got infected. I'd turned Windows sharing off on my virtual machine, and my home network sits behind a router that uses network address translation to hide my machines' IP addresses from the Net.

From now on, I'm going to need a good security program for my virtual Windows machines. (Friends have suggested AVG Free [free.grisoft.com], for starters.) I'm not too worried about Windows infections getting to my OS X installation, at least not yet. But I'm glad I'm not a full-time Windows user.

VMWare
New Kid on the Block

VMWare (www.vmware.com) has been providing virtualization software for Windows users for years. VMWare Fusion, which has been available as a free public beta since late December 2006 (I tested build number 36932), is the company's first Mac product.

Fusion is still in beta. No ship date for a final version has been announced. Given that, many features are missing or incomplete.

Installation

Like Parallels, Fusion installs with a standard OS X installer. But when it comes to installing Windows, you have to run Windows' installation program yourself. Fusion supports 19 different versions of Windows, from 3.1 through the 64-bit versions of Windows XP and Vista. You can also install Linux systems (including Red Hat and SUSE), Novell's Netware, Sun's Solaris, FreeBSD, and MS-DOS.

Fusion's other key differentiator is its support for what VMWare calls "virtual appliances"—preconfigured bundles of operating systems and applications that you can download and install with a few mouse clicks. For example, I downloaded MindTouch Deki, which lets you collaborate on documents wiki-style. I expanded the archive and then double-clicked on the resulting file. The appliance booted its operating system, configured itself, and was ready to use in about a minute (see "Virtual Appliance.")

If you've ever wanted to test-drive Linux, a Fusion virtual appliance is far and away the easiest way to do so.

Software Support

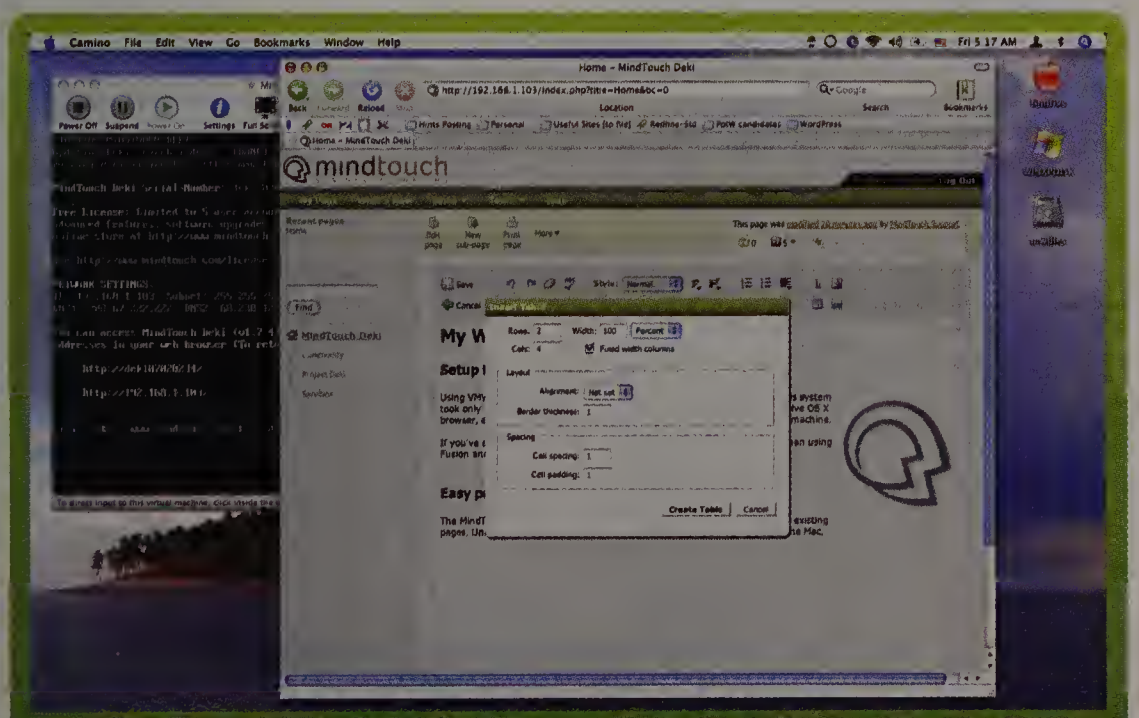
Running Windows apps in Fusion is much like running them in Parallels: for the most part, they just work. I found the speed in both Word and Excel to be more than acceptable; I was able to scroll through a long Word document from top to bottom in roughly the same amount of time it took me to do so while running Office 2004 in Rosetta on my MacBook Pro. *Pirates of the Caribbean 2* played as well as it did in Parallels.

Fusion has a full-screen mode, too, but nothing like Parallels' Coherence mode. You can move files and folders between OS X and Windows via drag and drop, but setting up a shared documents folder is much tougher than it is in Parallels.

Hardware Support

Fusion's hardware support is mixed. It supports Bluetooth if you install Apple's Boot Camp drivers. Like Parallels, Fusion will let you use your Bluetooth mouse within each program; unlike Parallels, Fusion lets you bind new Bluetooth devices to the virtual machine. And Fusion supports both cores in Intel Core Duo chips. In its latest release, VMWare has added "experimental" support for accelerated 3-D graphics, which worked just fine in my testing.

On the downside, Fusion has no FireWire support, except as a source of shared folders on a hard drive. I couldn't get my Wacom graphics tablet to work.



Virtual Appliance VMWare's virtual appliances are fully configured and ready-to-run software programs—such as MindTouch Deki, shown here—that you can download.

Who It's Good For

Overall, given that this is still a beta release, I was impressed with Fusion. It's got a ways to go before it's a polished Parallels competitor, and it isn't ready for people who need a stable, full-featured Windows environment. But it's a good start.

VMWARE FUSION BETA (BUILD 36932)

PROS: Prebundled "appliances" let you quickly install useful preconfigured systems and applications; uses both cores in Core Duo chips; can run 64-bit Windows.

CONS: Tricky to set up shared folders; plenty of beta issues; sketchy USB support; no FireWire support; no accelerated graphics.

PRICE: free (for beta)

COMPANY: VMWare, www.vmware.com

CrossOver
Windows Applications without Windows

CodeWeavers' CrossOver Mac (www.codeweavers.com) is unique among virtualization programs in that it doesn't actually require a copy of Windows. That's right: once you've paid CodeWeavers your $60 ($70 for a CD), you're ready to start installing Windows programs, without paying Microsoft a dime.

How is that possible? CrossOver is a Mac implementation of Wine (www.winehq.com), which provides versions of Windows-native libraries, so it appears to Windows apps that they're in a real Windows operating system.

Installation

Installing CrossOver couldn't be much simpler: you just drag its application icon into your Applications folder. You don't need to run an OS X installer, install Windows, or even reboot before you start using the program. To install a Windows application in CrossOver, you can either insert the program's installation CD or run CrossOver's Install Software assistant.

CrossOver uses *bottles* to organize your installed applications. A bottle is a virtual Windows environment, each with its own C: drive, fonts, and registry. You can install multiple applications in one bottle, or you can create a new bottle for each program you install.

If you're installing a program that CrossOver knows how to handle, it'll create a bottle automatically. If you're installing an unsupported program, you'll need to specify which Windows it requires. (Your choices are Windows 98, Windows 2000, or Windows XP.)

For most applications, that's all the configuring you'll need to do. If you do need to make some tweaks, you use CrossOver's Bottle Manager, which lets you adjust all sorts of settings (see "Configuring Bottles"). From then on, you can launch the program from within CrossOver or by just double-clicking on the application in the Finder, as you would do for any other OS X application.

Software Support

Once it's installed, how well does CrossOver actually work? The answer ranges from "incredibly well" to "not at all." The company has classified more than 2,500 Windows applications for compatibility. Ratings run from gold (perfect compatibility) and silver (runs with some bugs) down through the self-explanatory "Known Not to Work." Of those 2,500-plus programs, only 55 get a gold or silver rating; the vast majority are labeled Untested.

In my testing, those ratings proved accurate. Older versions of Microsoft Office (97 and 2000, both of which have a gold rating) worked quite well. Office XP (with a silver rating) worked OK, with an occasional graphical glitch and a crash or two. Newer programs can be problematic: you can run Internet Explorer 5, but you can't use versions 6 or 7.

Gaming is where CrossOver offers a pleasant surprise. Unlike Parallels, it supports accelerated 3-D graphics. That means you can run some Windows games directly within OS X.

Hardware Support

CrossOver can see any external hard drives (USB and FireWire) and memory sticks that OS X can see, and you'll have access to them from the Open and Save dialog boxes in Windows. Other hardware is trickier. If your device requires a Windows-specific driver, odds are it probably won't work in CrossOver.

Who It's Good For

If your Windows needs are limited—for example, if you just want to open and edit old Office documents and don't want to pay for a Windows license, CrossOver is a fine alternative. It's also a viable choice for PC gamers looking to play the occasional Windows game without logging out of OS X. But if you need a fuller Windows experience, one of the other programs will be a better fit.

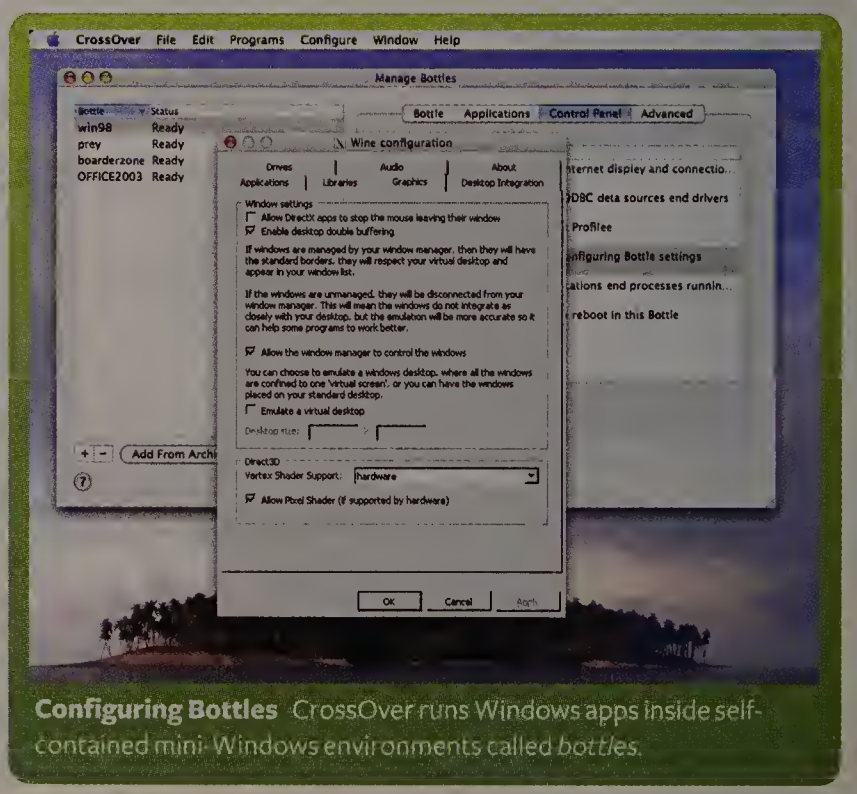
CROSSOVER MAC 6.0

PROS: No need to purchase Windows; supports accelerated 3-D graphics; easy to install.

CONS: Limited application compatibility; no access to the full Windows OS if you need it; USB devices may not work with games.

PRICE: $60

COMPANY: CodeWeavers, www.codeweavers.com



Configuring Bottles CrossOver runs Windows apps inside self-contained mini-Windows environments called *bottles*.

Which Windows?

A field guide to the *other* OS

Knowing *how* to run Windows on your Mac is one thing. Knowing *which* Windows version to run is something else altogether.

There are not only four different versions of Windows Vista on store shelves, but also two different versions of Windows XP still available if you know where to look.

Vista and Virtualization

If you plan to run Windows through Parallels Desktop for Mac or VMWare Fusion, Microsoft has made your choice of Windows easy. The end user license agreements (EULAs) that come with Vista Home Basic and Vista Home Premium versions specifically forbid you to operate them under virtualization. I've found no technical reason why you can't run these versions of Windows under virtualization, but it's technically illegal to do so.

The official reason for this restriction is security. Microsoft is happy to let you run Vista Business and Vista Ultimate editions under virtualization, because they include more-robust safety features. Because a Mac running Apple's Boot Camp is for all intents and purposes a living and breathing Windows PC, Microsoft has no objection to your running any version of Vista on it.

Regardless of which version of Vista you install, Microsoft demands that each installation have its own license. So if you wish to install it in both Boot Camp and a virtualization application, you'll need two Windows licenses.

What's the Difference?

Roughly speaking, the various Vista editions shake out this way.

Vista Home Basic is just that, a very basic version of Windows that doesn't include Microsoft's Aero visual effects and also lacks Windows Media Center, Windows Flip 3D Navigation, Scheduled and Network Backup, Windows Meeting Space, and Tablet Technology. It sells for $199 for a full installation.

Vista Home Premium adds the Aero effect as well as the features and programs missing from Home Basic. Windows Media Center, the major selling point for this edition, enables your computer to act as a television and video recorder. The Mac's hardware doesn't support many of these features. Media Center also includes DVD-burning and movie-creation applications, as well as some games. The full installation of Home Premium costs $239.

Vista Business replaces Home's multimedia capabilities with security, networking, and sharing features not found in the Home versions. Those features include Domain Join, Group Policy support, Encrypting File System (EFS), Corporate Roaming, and Remote Desktop. Microsoft asks $299 for Vista Business.

Finally, Vista Ultimate includes everything found in the three less-expensive versions of Vista plus a few extras—a card game, additional language packs, and more security. Vista Ultimate comes at an ultimate price—$399 for a full installation.

Do You Need Vista?

Vista is unquestionably the future of Microsoft's operating system. But even PC users who like Windows have been complaining about Vista's performance. Vista running under Parallels Desktop for Mac is no speed demon and is occasionally unpredictable. It's better under Boot Camp but still far from perfect.

Windows XP, on the other hand, isn't half bad, no matter how you run it on your Mac. It's a more mature version of Windows and therefore less buggy. It's also less laden with eye candy, so it's faster than Vista.

XP is also much better than Vista when it comes to virtualization. Because virtualization wasn't a threat when XP was released many years ago, there's no provision in the EULA that forbids you to run it under Parallels, Fusion, or whatever else you want to use. And even under virtualization, XP Home, XP Professional, and most Windows applications (save 3-D games and other 3-D–intensive applications, which perform poorly) run at near-native speeds on a modern Intel Mac. People running Boot Camp will find that XP is blazingly fast.—CHRISTOPHER BREEN

Windows Vista: What You Get

Features	Home Basic	Home Premium	Business	Ultimate
Backup: Scheduled Backup		●	●	●
Backup: Windows Complete PC Backup and Restore			●	●
Collaboration: Windows Meeting Space		●	●	●
Data Protection: Windows BitLocker Drive Encryption				●
Eye Candy and Navigation: Aero Effect, Windows Flip 3D, and Live Thumbnails		●	●	●
Media and Entertainment: Windows Media Center, Windows DVD Maker, Windows Movie Maker, Chess Titans, Mahjong Titans, Inkball		●		●
Mobile: Windows Mobility Center, Tablet PC Support		●	●	●
Networking: Networking Center, Remote Desktop			●	●
Search and Internet: Instant Search, Windows Internet Explorer 7	●	●	●	●
Security: Windows Defender, Windows Firewall	●	●	●	●

Boot Camp
Ultimate Compatibility

While Parallels, Fusion, and CrossOver are good for running Windows apps from within OS X, if you want the complete Windows experience, you need Apple's Boot Camp (www.apple.com/bootcamp).

In free public beta at the time of this writing, and slated for inclusion in Mac OS X 10.5, Boot Camp is unlike the other three programs: it doesn't let you run Windows apps alongside your OS X apps. Instead, it converts your Mac into a full-blown Windows computer.

Installation

When installing Boot Camp, the first thing you do is let the Boot Camp Assistant partition your hard drive into two pieces—one for OS X and another for Windows (see "Partitioning for Windows"). The partition size you specify will depend largely on what you plan to do with Windows; if you're installing big apps or you'll be using big data files, you size the partition accordingly. None of your existing data is lost in this process and, if you change your mind later, the Boot Camp Assistant will also merge your split disk back into one, deleting the Windows data while keeping your OS X files intact.

The next step is to burn a CD with Mac drivers. This CD is the key to Boot Camp's great Windows support: it adds specific drivers for your Mac's hardware to Windows.

Boot Camp Assistant then asks you to insert your Windows CD (XP Service Pack 2, Home or Pro only), and the installer starts. I expect that Boot Camp will also support Vista by the time Apple releases OS X 10.5.

Once Windows is installed and you reboot, you choose which OS you want to use by holding down the option key. You pick your new Windows partition and then use the Mac drivers CD you burned earlier to install the Windows drivers for all your Mac-specific hardware. Once you've done that, you've got a real, honest-to-goodness Windows XP computer.

Software Support

Pretty much anything that runs on Windows will now run on your Mac. Nothing is being emulated, nothing is being simulated.

The main downside is that you have to reboot your machine to run your Windows software. So if you're involved in a project in OS X and want to quickly run a Windows application that Paral-

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Mac Power User Track
- Apple's Latest and Greatest
- OS X Leopard Sneak Peek for the Power User
- Introduction to Automator
- A UNIX Guide to OS X
- Installing and Managing PostgreSQL on Mac
- FileMaker Pro Out of the Box
- FileMaker 7 Databases and the Web
- FileMaker and Automator
- Killer iLife Tips and Tricks for the Power User

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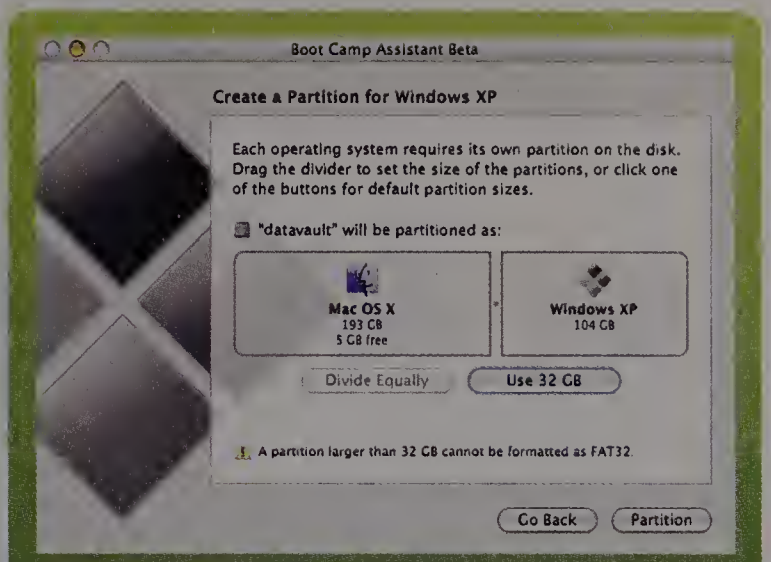
lels or Fusion can't handle, you'll have to save your work, shut down your Mac, reboot, do whatever it is you wanted to do in Windows, and then repeat the whole process to get back to OS X. Unfortunately, until Fusion, Parallels, or CrossOver supports your program, Boot Camp is your only option.

The other bummer is that it's trickier to share files between Windows and OS X in Boot Camp than in the virtualization apps. You'll need a FAT32-formatted drive, or access to a file server that both Windows and OS X can connect to. The other alternative is to purchase MacDrive for Windows (macworld.com/2620), which will let Windows read from and write to your Mac partition. MacDrive works quite well but will set you back $50.

Hardware Support

Thanks to the Windows driver CD, all your Mac-specific hardware—Bluetooth, AirPort, and even the built-in iSight camera—will work perfectly in Windows.

Boot Camp is especially great for gamers, because it fully supports accelerated 3-D graphics. So stop hoping that all those Windows-only games will get ported to the Mac and start playing; they'll work well on any Mac that supports advanced 3-D acceleration (which means pretty much any Mac except for the Mac mini and the MacBook).



Partitioning for Windows When you run the Boot Camp Assistant, the first thing you have to do is split your hard drive into two pieces—one for OS X and one for Windows.

Who It's Good For

If you want to play 3-D games on your Mac, or if you use hardware that's not yet supported in Parallels or Fusion, then Boot Camp is for you. It's also your best bet if you need full access to all your Mac's hardware.

Senior Editor **Rob Griffiths** runs the MacOSXHints.com Web site (www.macosxhints.com).

BOOT CAMP 1.1.2 BETA

PROS: Runs Windows natively with full hardware support; 3-D graphics acceleration.

CONS: Requires rebooting; hard to share files between OS X and Windows; supports only two versions of Windows.

PRICE: free

COMPANY: Apple, www.apple.com

TECHNOLOGY

Simply the best external storage solutions for your Mac

But don't take our word for it. G-DRIVE Q was the 2006 recipient of the coveted Editors' Choice Award from Macworld Magazine and the only hard drive to garner a perfect five-mouse rating. Our mission to provide the best external storage solutions for Macs is simply unmatched in the industry. Every G-Tech storage solution is designed to provide the perfect combination of performance, style and reliability to support your digital lifestyle.

NEW!

G-SAFE
Protected storage to safeguard your stuff

G-RAID mini
Fast and portable FireWire bus-powered storage. Up to 320 GB.

G-DRIVE Q
MacWorld Eddy Award winner, FireWire/USB/eSATA. Up to 750 GB.

NEW!

G-MINI
Perfect storage companion for Mac mini and Airport Extreme. Up to 750 GB.

See the full line of G-Tech Products at
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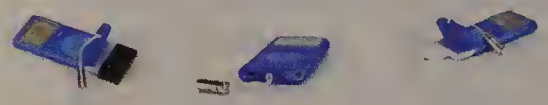
zCover iSA micro2 series for iPod nano2,

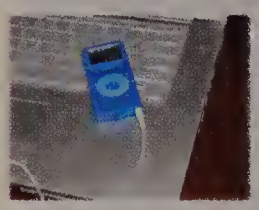
Cases Material: top grade silicone rubber
Case Color(s): ice clear, blue, black, pink, red, yellow, purple, and green
All over protection rate: 98%
Access to top controls: Yes
Access to click wheel: Yes, Integrated ultra thin Click Wheel protective skin
Screen Protection: Yes, hard crystal clear screen protector with soft pad ring
Dock Connector protection: Yes, with integrate flipper bottom
Access to Dock Connector: Yes
FM transmitter adaptable with case on: Yes
Use Dock base with case on: Yes
Lanyard or Rotary Belt Clip includes in retail pack: Yes
Compatible: Universal Armband, Windshield Clip & Universal Belt Clip

zCover iSA micro2 series case are dockable, adaptable, durable and washable, stylish and functionality. Its lanyard design flip open bottom allows you to charge or connect your iPod nano2 even with lanyard carrying case on. The user-friendly flip bottom feature also allows for charging your iPod nano2; connect your iPod nano 2nd Gen with FM transmitter even without take off the case

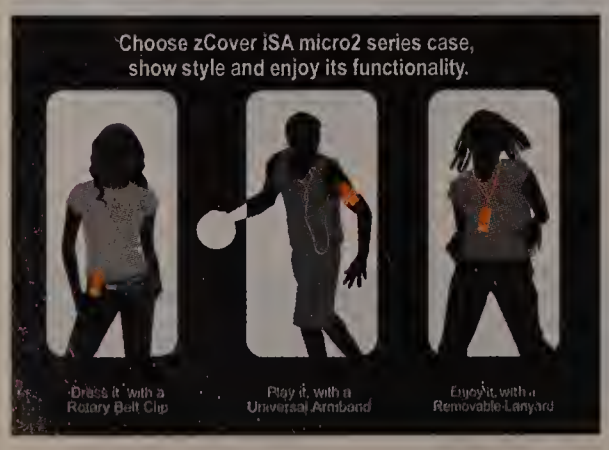


zCover shipped retail pack iSA micro2 for the new iPod nano on September 16, 2006, just **4 days** after the new iPod nano released by Apple on September 12, 2006

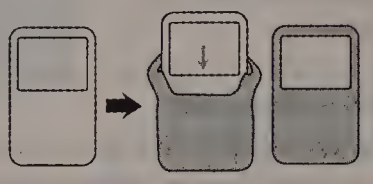
Integrated ultra thin Click Wheel protective skin. It is very sensitive to the touch! This is zCover function add-up feature



In addition to championship in speed of product development, zCover iSA silicone cases have been nominated by Macworld Awards 2006 as editor's choice in the iPod Accessory Category. As the Only iPod Protection Case that has so far won such a nomination, our iSA series will be the best solution for the iPod customers. zCover is also a winner of BEST of Show of Macworld Expo 2007.
You can clean your cover using warm, soapy water. Lather the silicone cover, rinse thoroughly, pat down extra moisture if desired and allow to air dry. Do not blow-dry or place under extreme heat.



warning: zCover User's Manual and Warranty policy instruct user(s) to install and uninstalled the right model iPod into zCover iSA series case from Screen Opening ONLY. Please reference our online website www.zcover.com or the menu in the retail box for the detail installation and warranty policy.

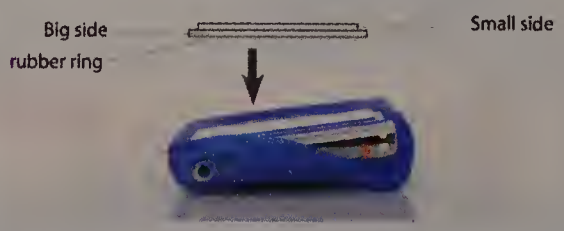


Q Can I use the iPod dock with the zCover case for my nano2?

A Yes, simply flip the case bottom of your zCover skin open, and dock it into Apple Dock or any popular dock station designed for iPod nano2. With the same method, you can adapt any popular FM transmitter, power or dock port adapters. zCover unique flip open bottom design provides the best solution of dock protection while still allowing user-friendly accessibility to all add-ons cases.

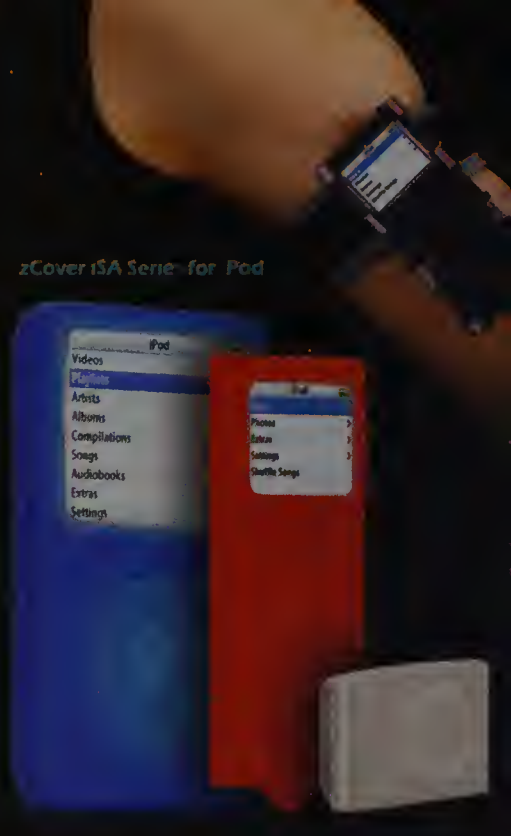
Q How to install the zCover screen protector?
Does the screen protector scratch my gadget screen?

A Same as install iPod into zCover case, install screen protector from screen opening as well. zCover customized crystal-clear hard screen protector with soft landing pad provides the best vision effect, perfect fit, and prevents scratching and dirt to your screen.



Let big side touch your gadget and use zCover case to hold the edge.

Please reference our online website www.zcover.com or the menu in the retail box for the detail installation instruction.



The Ultimate Home Office

BY CHRISTOPHER BREEN

Pity the modern worker. Back when our ancestors served their 60 hours a week lashed to lathes, coupled to conveyor belts, and harnessed to harvesters, it was impossible to take work home. Clock out, and you were done for the day. No longer. The home office—whether as an adjunct to a distant workplace or as the location of your primary workplace—is a common component of home.

But what determines the perfect home office? Other than available space, the most limiting factor is money. We'd all love to pour unending streams of lucre into our home offices to obtain lightning-fast computers, massive monitors, and software powerful enough to manipulate the solar system. But let's face it, the kid needs braces, that scraping sound from the brakes can't be good, and it won't be long before the spring protruding from the couch gives someone tetanus. With that in mind, I'm here to offer advice on creating the ultimate Mac-based home office—within reason. In this case, I define *reason* as a budget of $1,500, $3,000, or $6,000.

Whether your budget is big or small, we've got the perfect Mac setup for you

The rules of the game are these: You will buy a new Mac and equipment—no used gear or software is allowed. Tax is not included in our recommendations. I assume you have the furniture you need and wired broadband. At the very least, you must be able to use e-mail; browse the Web; create, read, and edit Microsoft Office–compatible documents; and perform basic billing and expense tracking. The rest comes out of your budget.

My recommendations are based on prices easily found on the Internet at such familiar and accessible outfits as the Apple Store, Amazon.com, and Costco.com. And of course, regardless of how much money you actually have, you'll find interesting tips you can use when you need to make tough purchasing choices.

Follow along as we break out the virtual credit card and gear up to create the ultimate home office.

ILLUSTRATION BY JOHN KOCON

The Basics

My pick for your computer is the $1,199 2GHz 17-inch iMac Core 2 Duo (★★★★½; macworld.com/1728). People familiar with Apple's computer offerings understand that the iMac is not the company's least expensive model. That honor goes to the $599 1.66GHz Mac mini Core Duo (★★★★; macworld.com/1731). Given the mini's low price, why recommend a computer that costs twice as much? Because of what the mini lacks and the iMac provides.

Specifically, the mini includes no keyboard, mouse, or monitor. If you don't have these items (which is the case in this little experiment), you can expect to drop at least $200 or $300 to get them. The 1.66GHz Mac mini Core Duo includes only a Combo drive—a drive capable of reading DVDs and playing and burning CDs but *not* burning DVDs. This drive won't let you burn your projects or back up really large files to DVD. The mini offers a scant 512MB of RAM, which can result in poor performance, especially with iLife programs such as GarageBand and iMovie. Likewise, its hard drive is cramped at 60GB. Make a few movies or acquire a decent collection of music and videos from the iTunes Store, and your hard drive is full.

In addition, the mini's Intel GMA 950 graphics processor, which shares 64MB of the mini's main memory, is nothing to write home about. (If you plan to spend your off-hours playing 3-D games, definitely cross the mini off your list.) Finally, unlike the rest of the Mac line, the mini includes an Intel Core Duo processor rather than the more powerful Intel Core 2 Duo.

The mini becomes less attractive when you consider what the iMac brings to the table. To begin with, all iMacs offer an Intel Core 2 Duo processor, which Apple suggests is up to 50 percent faster than the Core Duo. The 2GHz 17-inch iMac Core 2 Duo satisfies the desire for more RAM and hard-drive space by including 1GB of RAM and a 160GB hard drive. It also sports an 8× double-layer SuperDrive and includes the ATI Radeon X1600 graphics card, which holds 128MB of its own SDRAM. Add to that a built-in iSight camera, a built-in monitor, built-in speakers, AirPort and Bluetooth, an Apple Remote for controlling Front Row, and an included keyboard and a Mighty Mouse, and you're looking at a pretty capable Mac that fits a bargain budget.

Why not save $200 by purchasing the $999 1.83GHz 17-inch iMac Core 2 Duo (★★★★; macworld.com/1727)? The lowest-

ILLUSTRATION BY JOHN KOCON; TAG PHOTOGRAPH BY PETER BELANGER

priced iMac is hobbled by its lack of a SuperDrive, an underpowered Intel GMA 950 graphics card, and 512MB of RAM. You could get away with it if you don't care about backing up your data to DVD or playing games. But although you might think you'd save money by shopping around for RAM instead of getting it preinstalled, times have changed. Having Apple install RAM was once prohibitively expensive, but now the company's prices are competitive.

Outfitting Your Office

We've burned up $1,200 of our budget already, so we need the biggest bang for the littlest buck for our other office peripherals. The bargain office requires a single device that performs multiple functions, and HP's Photosmart C6180 (www.hp.com) does that for just $216.

The Photosmart C6180 includes a color ink-jet printer, a flatbed scanner, a copier, and a fax machine. It includes slots for a variety of media card types, so you can print directly from your cards. The printer uses individual color cartridges, so you needn't toss out a single multicolor cartridge simply because you've run out of one color. And the printer supports both Ethernet and wireless 802.11b networking.

In my experience, HP's Mac software can be problematic. It always pays to download the latest set of drivers. Fortunately, many of the applications included with HP's multifunction printers are unnecessary. You can do most of what you want with Apple's Image Capture and iPhoto, which are included with your Mac.

The Best Software for the Budget

We've now spent $1,415 of the budget, which leaves no room for a copy of Microsoft Office. Although I feel that the real thing offers distinct advantages over other options, the free, open-source NeoOffice (www.neooffice.org) is a reasonable compromise for many people.

Based on the OpenOffice.org office suite, NeoOffice doesn't require that you run the X11 X Window System for it to work (a requirement for Mac users running OpenOffice). NeoOffice opens nearly all Office documents you throw at it, including Word files and Excel spreadsheets (save for some created by the Windows-specific Microsoft Office 2007), and, for the most part, maintains the original document's look-and-feel. (PowerPoint presentations may lose embedded media, and custom bullets may appear as odd characters, for example). You can also save your NeoOffice documents in native Microsoft Office formats so that others can open them.

Media Software Every new Mac includes a free copy of Apple's iLife multimedia suite, and with only $85 left in your budget, free is just about what you can afford. Fortunately, iLife works great. From making movies to burning those movies to DVD, organizing your photos and music, creating attractive Web sites, and making music, iLife has you covered.

Although Microsoft Office has distinct advantages, many people will find the free, open-source NeoOffice a reasonable compromise.

AppleWorks was once bundled with many new Macs, but Apple has set its easy-does-it office suite adrift. NeoOffice covers most of AppleWorks' capabilities—including a drawing component—but nothing in NeoOffice or bundled with the Mac allows you to unleash your inner artist. To do so, you need a good paint program, and the best bargain-basement Mac painting program currently available is Ambient Design's $20 ArtRage 2 (www.ambientdesign.com). ArtRage 2 is a natural media painting program, offering tools that emulate paint, chalk, pen, crayon, and airbrush set in an intuitive interface. Although a painting program may seem out of sync with a Mac meant for work, bear in mind that with little effort a good paint program can help you enhance business cards, flyers, reports, and presentations.

If you'd care to save $20, go with ArtRage 2 Free. Unlike with the full version, ArtRage 2 Free doesn't support layers, nor do you get the full complement of tools—no airbrush or paint roller, for example. However, even without these capabilities, it's a useful painting application, and you can't beat the price.

Bargain Office Shopping List

PRODUCT	PRICE
17-inch iMac Core 2 Duo/2GHz	$1,199
HP Photosmart C6180	$216
NeoOffice	$0
iLife	$0
ArtRage 2	$20
Quicken Mac 2007	$50
Belkin WaveRest Gel Mouse Pad	$10
TOTAL	**$1,495**

Finance Software For handling the finances of the average home office, Intuit's Quicken Mac 2007 (♦♦♦♦; macworld.com/1707) is the way to go. Although its list price is $70, we found that Costco sells it online for just $50.

Adding It Up

You've spent a total of $1,485. What to do with the remaining $15? There are any number of worthwhile and inexpensive shareware utilities that deserve your attention, but in order to put them to good use, you need the continued use of your hands, wrists, and arms.

To help keep those parts of your body in operational order, we'll use up much of the remainder with the Belkin WaveRest Gel Mouse Pad (www.belkin.com). Available for just $10, the pad will help keep your mouse hand more comfortable.

True, it would be wise to pocket the money you have left. But consider this: There's a world of great software for which the author asks nothing but a small donation. Visit MacUpdate or VersionTracker.com, find something "free" that you love, and send the author your $5.

The Middle-of-the-Road Office

$ If you feel pinched by a $1,500 budget but aren't willing to fully fling open the financial floodgates, you're looking at the middle-of-the-road office—one that costs no more than $3,000. With this budget, you can get a more-powerful computer (see "Middle-of-the-Road Office Shopping List" for a breakdown).

The Basics

The iMac was once the inexpensive "Mac for the rest of us," but it has turned from a moderate all-in-one performer into nigh on a desktop powerhouse. For this budget, I recommend the $1,499 2.16GHz 20-inch iMac Core 2 Duo (●●●●½; macworld.com/1729).

The iMac offers many of the same benefits found in the 17-inch iMac I recommend for the bargain office—a built-in iSight camera, a built-in monitor, built-in speakers, AirPort and Bluetooth, an 8× double-layer SuperDrive, 1GB of RAM, and the ATI Radeon X1600 graphics card (which you can upgrade from 128MB of SDRAM to 256MB for an additional $75). When you spend that extra $300, you gain a slightly faster Core 2 Duo processor, more screen real estate (with a resolution of 1,680 by 1,050 pixels versus the 17-incher's 1,440 by 900), and a 250GB hard drive.

In Search of Screen Space Why not trade down or up? Even a 20-inch display can be a little cramped, particularly if you work with large spreadsheets or use applications that include lots of palettes. If your work requires only more screen real estate—not a more expansive hard drive—you might consider rejiggering our budget to accommodate a second monitor. In that case, I'd add Apple's $19 Mini-DVI to DVI Adapter and Dell's UltraSharp 2007FP 20-inch Black Flat Panel Monitor (www.dell.com). It's bright and sharp, offers multiple video inputs (including VGA, S-Video, and composite inputs), and is inexpensive (it costs around $400). NEC and ViewSonic also make good-looking, although slightly more expensive, LCD monitors.

If your desk is too small to accommodate two monitors, the $1,999 2.16GHz 24-inch iMac Core 2 Duo (●●●●½; macworld.com/1730) is another option. But you'd eat up two-thirds of your budget just to gain another four inches of monitor space and a faster graphics card, Nvidia's GeForce 7300. I can think of better uses for the money, such as sticking with the 20-inch iMac and adding another gigabyte of RAM—an expense of $175 if you do it through Apple.

Again, you can actually *save* money these days by getting your RAM preinstalled. For example, when I compared Apple's RAM prices with those of Crucial (www.crucial.com), a popular RAM vendor, Apple's prices were lower at press time. That extra gigabyte of RAM makes your iMac a little zippier by

ILLUSTRATION BY JOHN KOCON; TAG PHOTOGRAPH BY PETER BELANGER

allowing the computer to use RAM rather than resorting to virtual memory, which is slower because it uses the hard drive.

Outfitting Your Office

With a middle-of-the-road budget, you can think outside the box—specifically, the box that held your Mac. Extra storage and alternate input devices will enhance your computing environment.

Extra Storage An external hard drive provides a fast and easy-to-access destination for your backup files. You'll need such a drive to use Time Machine, the slick-looking backup utility built into the upcoming Mac OS X 10.5 (Leopard). But since all Mac users should back up important data, you can put that drive to good use right now.

OWC's $250 500GB Mercury Elite-AL 800 Pro FireWire 800/400 (www.macsales.com) includes a 7,200-rpm drive and both FireWire 400 and 800 ports (but no USB 2.0 port). Better yet, Prosoft Engineering's Data Backup (★★★★½; macworld.com/2495) is bundled with the drive, saving you the cost of purchasing a separate utility.

Input Devices You've got a little money to burn and, because you do, there's no reason to settle for the limited Mighty Mouse that Apple includes with your iMac. A more versatile mouse can be had in the form of Logitech's MX Revolution Mouse (★★★★★; macworld.com/2338), which I found for $80 at both Costco.com and Amazon.com. This five-button, two scroll-wheel cordless mouse is highly configurable, precise, and—in my humble opinion—comfortable.

A Pair of Printers Sometimes you have to give a little to get a lot. In this case, you'll give a little more money for the hardware and, down the road, save a lot on consumables by purchasing a multifunction printer, such as HP's LaserJet 3055 (priced at $425 at Amazon.com), that incorporates a monochrome laser printer rather than a color ink-jet. Printer manufacturers sell their ink-jet printers for very little money, knowing that they'll make it up in the expensive inks these printers require. So, if you primarily print black-and-white documents, you're better off choosing a laser printer.

In addition to a laser printer, this HP multifunction printer includes a flatbed scanner, a copier, and a fax machine. The printer comes standard with a 250-sheet input tray and a 50-sheet automatic document feeder. It can connect to a network over Ethernet. And you can find compatible toner cartridges for under $25.

Sometimes you have to give a little to get a lot. For instance, you'll save a lot on consumables by purchasing a multifunction laser printer.

What the HP LaserJet 3055 lacks is photo printing, and most home offices require it. Because of its price and the quality of the prints it produces, we recommend HP's Photosmart D7360 (which costs $134 on Amazon.com). Although it's not the fastest photo ink-jet printer in the world, the D7360 includes separate ink cartridges, bears a large touch-screen LCD, and accepts a variety of memory cards.

The Best Software for the Budget

If you routinely work with documents created by both the Mac and Windows versions of Microsoft Office and require complete compatibility with those documents, you should run the real thing—Microsoft Office 2004 (macworld.com/2563). Unlike with NeoOffice, you won't encounter formatting problems and PowerPoint presentations won't lose their embedded media. Our one regret is that Microsoft Office 2008—a fully Universal edition of the ubiquitous office suite—won't ship until the latter half of 2007. It seems a shame to drop $300 (the Amazon.com price) for Office 2004 with a new version coming so soon. On the other hand, Microsoft Office 2004 runs perfectly well under Apple's Rosetta, and you may be happy enough with its performance that you see no need to upgrade to the next version. Also, if you have a minor child in school or your mate is a teacher, you qualify for the Microsoft Office Student and Teacher Edition 2004, which costs just $130 at Amazon.com (and may be even less expensive at the school bookstore).

Office Additions In addition to Microsoft Office, I recommend Apple's iWork ($70 at Amazon.com). You just can't make the kind of rich-looking documents with Microsoft Word that you can with Pages. It's a great tool to have when you need to make a simple newsletter or brochure. You can also create much cooler presentations with Keynote than with PowerPoint.

Media Software Yes, Apple's free iLife and the $20 ArtRage 2 are not only good enough for the bargain office, they're good enough for people with a midlevel budget.

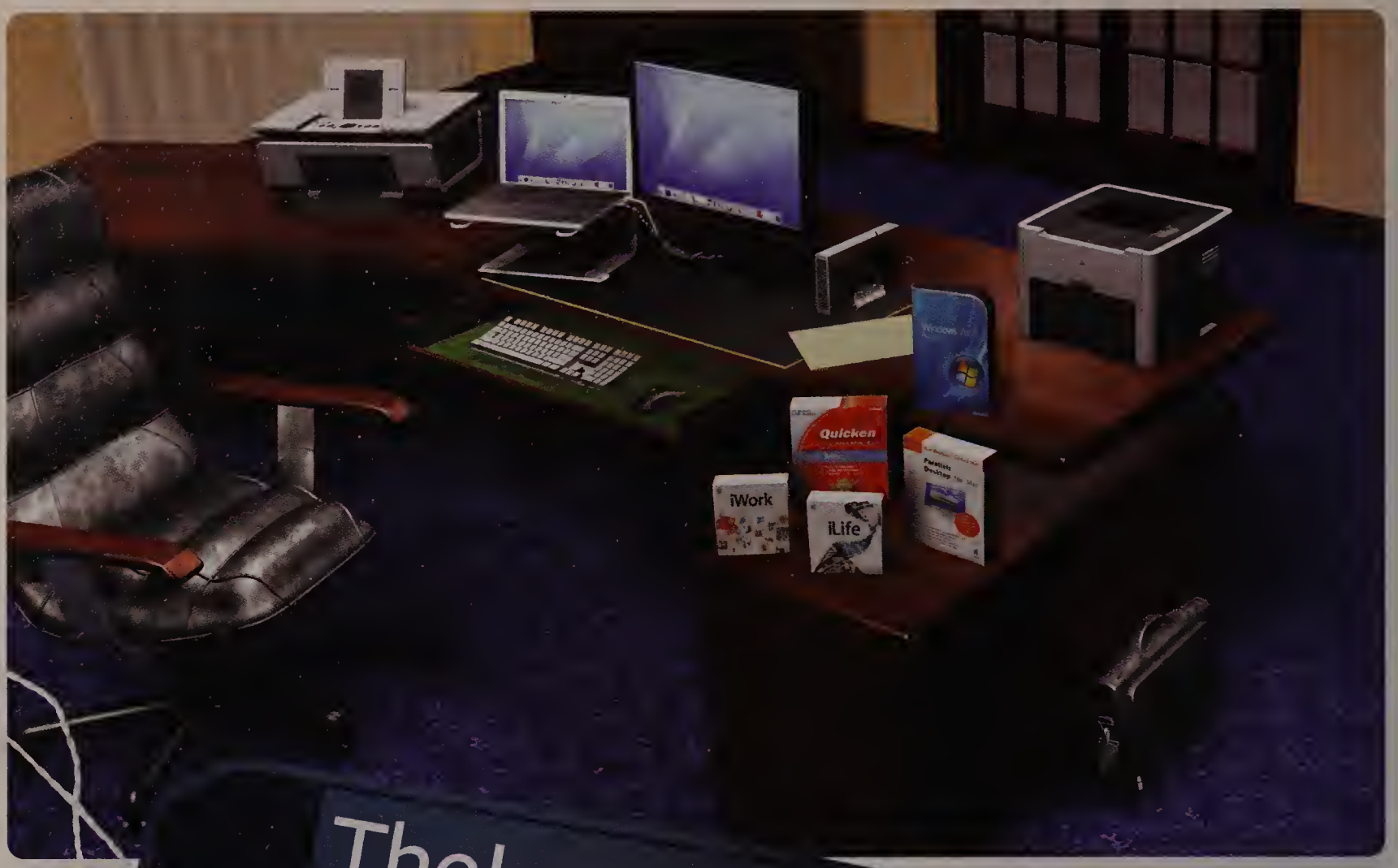
Finance Software You need to track expenses just as closely as other home-office dwellers do. Quicken Mac 2007 ($50 from Costco.com) is an inexpensive way to do it.

Middle-of-the-Road Office Shopping List

PRODUCT	PRICE
20-inch iMac Core 2 Duo/2.16GHz	$1,499
1GB of RAM	$175
500GB OWC Mercury Elite-AL 800 Pro FireWire 800/400	$250
Logitech MX Revolution Mouse	$80
HP LaserJet 3055	$425
HP Photosmart D7360	$134
Microsoft Office 2004	$300
iWork	$70
iLife	$0
ArtRage 2	$20
Quicken Mac 2007	$50
TOTAL	**$3,003**

Adding It Up

You've spent $3,003 and are just a bit over budget. Thankfully, because you're at home, it should take only a few minutes to dig beneath the couch cushions and make up the difference.



The Luxury Office

$ Ah, finally—the chance to spread your wings and live a little. Although you don't exactly have money to burn, $6,000 is enough to buy some mighty fine tools (see "Luxury Office Shopping List" for a breakdown).

The Basics

For the luxury office, I recommend starting with the top-of-the-line 2.33GHz 15-inch MacBook Pro Core 2 Duo (★★★★½; macworld.com/2405). Yes, I can hear the screams from here: *"But we've got the dough for the fastest Mac made!"* Just because you *can* buy a Mac Pro doesn't mean that you *should*.

The 15-inch MacBook Pro costs the same as a stock Mac Pro—$2,499. But consider what you get: a built-in iSight camera, AirPort and Bluetooth, 2GB of RAM, a 120GB hard drive, the ATI Mobility Radeon X1600 graphics card with 256MB of SDRAM, a bright display (flat or glossy), and, most importantly for many of us, *portability*. Why be chained to your desk when you can take your office anywhere? (For exceptions, see "When a Laptop Won't Do.")

Double your horizons by adding Dell's $674 UltraSharp 2407WFP 24-inch monitor. Put your MacBook on a stack of books next to the monitor. Or, if you're willing to spend the money, buy a stand, such as Griffin Technology's $40 Elevator (macworld.com/2564).

Outfitting Your Office

Like your cousin with the $3,000 budget, you've got money to throw at computer peripherals.

Extra Storage Because you can afford it, we're going to trade up to OWC's $270 500GB Mercury Elite-AL Pro FireWire 800/400+USB2 (www.macsales.com). This drive includes ProSoft's Data Backup for Mac OS X. It also has a USB 2.0 port, which is handy because one day you may wish to devote your MacBook's FireWire ports to another device. Also, Intel-based Macs can boot from a properly configured (and compatible, as this one is) USB 2.0 drive.

Input Devices I recommend wireless input devices for you. The $59 Apple Wireless Keyboard (★★★★; macworld.com/2565) uses Bluetooth, has a solid feel, responds nearly as well as a wired keyboard, and offers good battery life. I also recommend Logitech's $80 MX Revolution Mouse.

Printers and a Fax Machine Like our middle-of-the-road office, the luxury office will bear two printing devices. For starters, I choose the HP LaserJet 1320, which costs $400 at pcconnection.com. The LaserJet 1320 offers 1,200-dpi quality, automatic two-sided duplex printing; a speed of up to 22 ppm; and 16MB of memory.

I like Canon's $380 Pixma MP960 multifunction printer (★★★★; macworld.com/2473) for its solid print quality,

ILLUSTRATION BY JOHN KOCON; TAG PHOTOGRAPH BY PETER BELANGER; MAC PRO PHOTOGRAPH COURTESY OF APPLE

large LCD, built-in duplex printing, built-in transparency scanning, large paper capacity, and ease of use. This six-color photo ink-jet printer offers two paper trays, printing over Bluetooth, and two memory-card slots and a PictBridge port for printing directly from your digital camera.

The Pixma MP960 doesn't include a fax machine. Throw $75 of your budget at a fax machine that strikes your fancy.

A Message Center Nothing says "professional office" like a sophisticated answering service that channels calls to mailboxes, demands that the caller navigate through a hierarchical phone tree system, and routes calls based on the identity of the caller. Thankfully, you can do all this with Parliant's $170 PhoneValet Message Center 5 (www.parliant.com).

Two for the Road No matter how portable your MacBook may be, it's no match for a key drive that you can slip into your pocket. You can find Kingston Technology's DataTraveler 2GB USB Drive (www.kingston.com) on Amazon.com for a scant $25.

And lest we forget, when you take your MacBook Pro on the road, Brenthaven's $80 Leather Edge II Black laptop case (www.brenthaven.com) shows that you mean business.

The Best Software for the Budget

In case my recommending a laptop didn't sufficiently inspire your ire, try this: Run Windows on your Mac.

My logic plays out this way: If your job requires that you deal with documents generated by Windows PCs, it makes sense to run the operating system and version of Office that created them. The easiest and least expensive way to do this is to buy Microsoft Office Standard 2007 ($342 from Costco.com) and then get your MacBook Pro from MacMall (www.macmall.com), with Parallels Desktop for Mac (4½; macworld.com/1577) and Microsoft Windows Vista Business Edition preinstalled, for a total of $2,799. This is a savings of $44 versus buying the software yourself. And not only do you save money, you're spared the hassle of installing and configuring everything. Be aware that the Better Business Bureau gives PC Mall (owners of MacMall) only an average CCC rating.

Office Additions Also on our list is the $70 iWork. I don't care which version of PowerPoint you use, Keynote is still the better presentation application.

Media Software With Apple's free iLife and the $20 ArtRage 2 at your disposal, you can create and edit music, photos, movies, and graphics.

Troubleshooting Team New for the Luxury office is a utility that helps ensure that your hard-won data remains intact. Alsoft's DiskWarrior 4 (5; macworld.com/2503)—$95 at Amazon.com—can re-create the low-level directory that makes your Mac tick.

Finally, when you're carrying around—and possibly dropping—a laptop, Apple's three-year extended warranty can give you some peace of mind; $349 gets you the AppleCare Protection Plan for a MacBook Pro (macworld.com/2566).

Extra Goodies The luxury office needs Quicken Mac 2007 ($50 from Costco.com), just as our other offices have. To round out your setup even more, add C-Command's SpamSieve ($30; c-command.com). It's the best spam-filtering utility around. For launching applications via typed shortcuts, get Objective Development's $20 LaunchBar 4.1 (5; macworld.com/1010). (Note that the $20 price is for the Home User license.)

Luxury Office Shopping List

PRODUCT	PRICE
15-inch MacBook Pro Core 2 Duo/2.33GHz with Parallels Desktop for Mac and Microsoft Windows Vista Business Edition preinstalled	$2,799
Dell UltraSharp 2407WFP 24-inch monitor	$674
500GB OWC Mercury Elite-AL Pro FireWire 800/400+USB2	$270
Apple Wireless Keyboard	$59
Logitech MX Revolution Mouse	$80
HP LaserJet 1320	$400
Canon Pixma MP960 multifunction printer	$380
generic fax machine	$75
PhoneValet Message Center 5	$170
Kingston Technology Data Traveler 2GB USB Drive	$25
Brenthaven Leather Edge II Black laptop case	$80
Microsoft Office Standard 2007	$342
iWork	$70
iLife	$0
ArtRage 2	$20
DiskWarrior 4	$95
AppleCare Protection Plan for a MacBook Pro	$349
Quicken Mac 2007	$50
SpamSieve	$30
LaunchBar 4.1	$20
TOTAL	$5,988

Adding It Up

You've spent $5,988 and have $12 left. Treat yourself to a classic movie and TV episode ($10 and $2, respectively) from the iTunes Store. You deserve it.

Senior Editor **Christopher Breen** is the author of *The iPod and iTunes Pocket Guide*, second edition (Peachpit Press, 2007).

When a Laptop Won't Do

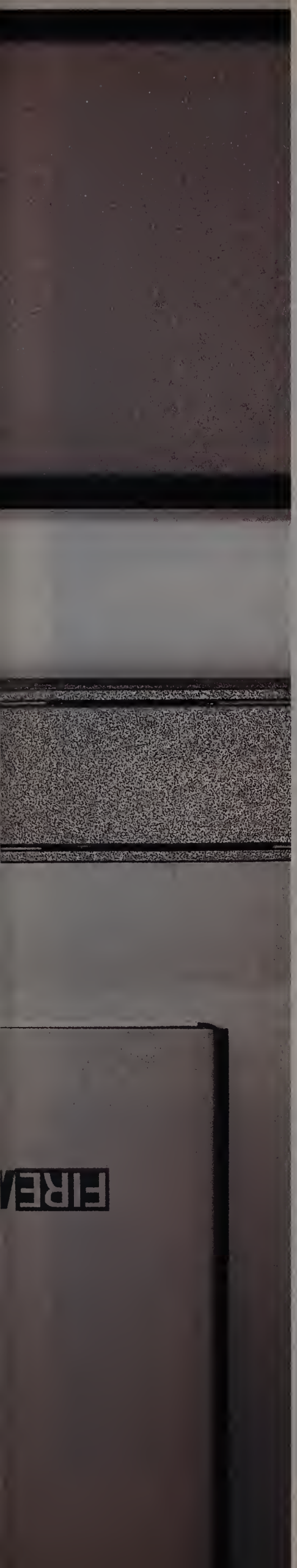
If you're in the multimedia business and use your Mac to work with audio, graphics, and video files, the MacBook Pro may not be the best choice for you. You actually *need* the $2,499 2.66GHz Mac Pro (4½; macworld.com/1646), for its Dual Core Intel Xeon processors and abundant capacity for storage (up to 3TB). Your applications appreciate as much RAM as you can feed them (the Mac Pro supports up to 16GB). Also, the Mac Pro's three PCI Express slots can accommodate the video and audio cards your business might need. If so, purchase a Mac Pro with my blessing. Otherwise, I contend that the Mac Pro is overkill—and nonportable overkill at that.

One Drive Fits All

Six new hard drives offer every connection you could need

BY JEFFY MILSTEAD

PHOTOGRAPHY BY PETER BELANGER



Hard drives are like pacemakers:

both are precision instruments whose users depend on them every day. And while you probably don't expect your hard drive to be as reliable as a pacemaker, both keep getting better as technology marches forward. Drive vendors are now touting one new step in hard-drive technology: a more flexible type of hard drive known as the quad-interface (or four-port) configuration.

Quad-interface drives—with USB 2.0, FireWire 400, FireWire 800, and eSATA ports—are smart choices because they'll satisfy your backup needs now, but they'll also be relevant in the future.

Four-Port Flexibility

Why would you choose to buy a four-port drive when perfectly good three-port models are available for less money? Depending on where you shop, the difference in price between triple- and quad-interface drives of the same capacity can be surprisingly close: from 0 to 20 percent more for a quad-interface drive. Pricing always matters, for sure, but in most cases, that extra port is affordable.

Perhaps the best reason to choose a four-port drive is that it allows for maximum flexibility. Three-port drives can connect to a variety of ports, but four-port drives offer the external SATA (eSATA) port—one you may find yourself using more often two years down the road. The eSATA connection isn't *yet another* new type of hard-drive connector that may or may not catch on; if you own an Intel Mac, you've been using an internal SATA drive, perhaps without realizing it. SATA lets you realize high speeds; it's here to stay, and we'll be using it for years to come.

Will SATA supplant FireWire 800, the next-fastest type of connection? And if so, how soon? Judging purely by performance numbers, you might think FireWire 800's days are numbered. SATA II (the most recent SATA specification) has a theoretical top speed of 3 Gbps (gigabits per second), and is backward-compatible with drives conforming to the old 1.5-Gbps SATA I standard. Contrast this with the relatively meager 800-Mbps speed of FireWire 800—about one-third the speed of SATA II. While real-world drive performance is nowhere near these theoretical numbers, SATA drives offer the additional headroom that FireWire 800 doesn't, making SATA a very forward-thinking option.

eSATA versus FireWire

Although SATA connections promise blazing speeds, FireWire 800 has some endearing features that we often take for granted. For instance, maintaining a quiet workspace occasionally means banishing a particularly sonorous drive as far away from your computer as possible. FireWire 800's maximum cable length tops out at about 15 feet, while eSATA drives can be no further from your computer than about six feet. Another important feature of FireWire—and of USB, for that matter—is the ability to power devices directly from the bus. eSATA provides a data connection only, so any eSATA hard drive must have its own power source, further contributing to cable and power-brick clutter.

One crucial element that is necessary for utilizing the eSATA port on these quad-interface hard drives is a matching eSATA host adapter card that's appropriate for your Mac model. While there are several options for different expansion cards, for our testing purposes we selected two PCI-X cards that were compatible with our standard dual-core Power Mac G5 test platform. These two cards, OWC's Serial ATA 2-Channel PCI Controller Card and Sonnet Technologies' Tempo X SATA

TIP **Build It Yourself** If you need more flexibility in terms of capacity, or if you're looking to save a few dollars, you can add your own drive to a stand-alone eSATA enclosure or buy a complete eSATA kit consisting of an enclosure, a drive, and an eSATA interface card (some of the vendors mentioned in this review offer enclosures and kits).

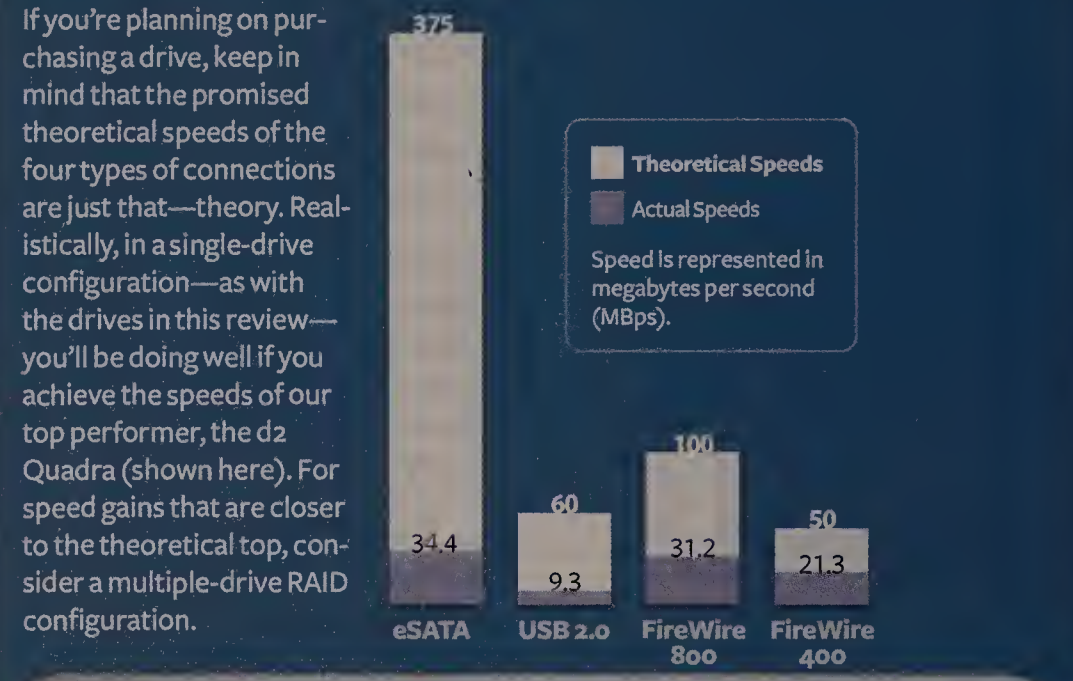
TIP

Upgrading to eSATA

Depending on its model, you can upgrade your Mac to support an eSATA drive, via the appropriate type of expansion card: G4 and late-model G5 towers take PCI and PCI-X cards, and dual-core G5s and Mac Pro towers use PCI Express. For portables, both the 15- and 17-inch MacBook Pro models can support eSATA through the ExpressCard/34 expansion slot on those machines. As always, check the card's specs carefully before you buy. Fortunately, many vendors make it easy by selling eSATA drives with a card they have tested and can recommend.

Drive Speeds: Theory versus Practice

If you're planning on purchasing a drive, keep in mind that the promised theoretical speeds of the four types of connections are just that—theory. Realistically, in a single-drive configuration—as with the drives in this review—you'll be doing well if you achieve the speeds of our top performer, the d2 Quadra (shown here). For speed gains that are closer to the theoretical top, consider a multiple-drive RAID configuration.



How we tested: We copied a 1GB folder from an internal drive to the external drive.

4+4, were chosen based on the card vendors' assertion that each card can boot from eSATA drives. Both of the cards were able to mount each formatted eSATA drive. Be aware that not all cards will allow you to boot from your drive. Lingering incompatibilities between cards and drives still remain, and it's always a good idea to check with a drive vendor to see if it sells or recommends a particular card.

For this comparison review, we looked at six quad-interface hard drives: Edge Tech's DiskGo Quad Interface, LaCie's d2 Quadra Hard Drive, OWC's Mercury Elite-AL Pro Quad, ProMax's FireMax Quad, Rocstor's Rocpro 300 C, and WiebeTech's ToughTech XE Quad. In general, all the drives performed similarly in our testing, which might make appearance, price, and other details more important factors in a buying decision.

Size versus Price

To make valid comparisons between drives, we settled on 500GB as the median size that might be attractive to the majority of buyers. If this size is too small or too large for your needs, most vendors offer versions of the same four-port drive in a range of other capacities (150GB to 750GB) and prices. Rocstor offers the widest range of options, but LaCie currently offers only the 500GB version of its d2 Quadra, which we review here. For the most part, you'll get more when you spend more, but you'll spend a lot more for the largest drives. For example, stepping up to a 750GB Rocpro from a 500GB model represents an increase of 75 percent in cost, while only giving you 50 percent more space.

Design Considerations

All the drives we looked at feature 3.5-inch, 7,200-rpm mechanisms, so they

d2 Quadra Hard Drive 500GB — TOP PRODUCT

4½

PROS: Sturdy and attractive; bundled with Retrospect Express; automatic power-saver mode; quiet; vertical stand; programmable shortcut button.

CONS: Heavy power adapter.

PRICE: $290

COMPANY: LaCie, www.lacie.com

FULL REVIEW: macworld.com/2553

DiskGo Quad Interface 500GB

3

PROS: Anti-shock enclosure; quiet.

CONS: Unable to boot from either SATA card; lacks a dedicated FireWire 400 connector; no slot for antitheft cable; no bundled software.

PRICE: $285

COMPANY: Edge Tech, www.edgetechcorp.com

FULL REVIEW: macworld.com/2552

FireMax Quad 500GB

4

PROS: Quiet operation; small.

CONS: Pricey; cramped power switch; heavy power adapter; no bundled software.

PRICE: $399

COMPANY: ProMax, www.promax.com

FULL REVIEW: macworld.com/2554

Before You Store: What to Look for in a Hard Drive

Most seasoned computer users understand the importance of performing regular backups of their computer's hard drive. They've probably either had their bacon saved by keeping a current backup or learned the value of their data the tough way—through a hard-drive failure.

If you're one of the data daredevils who computes without the safety net of a backup strategy, you should know this: it's not a question of if, but when, your hard drive will fail. A second physical hard drive, either installed inside your computer or attached externally, can make easy work of backing up your precious photos, music, e-mail messages, and tax records.

Of course, backing up isn't the only reason to purchase an additional hard drive. Just about everything we do with our computers these days requires more megabytes than it used to. Photos are increasingly in the larger, Raw format; video is more often in high definition format; and music can now be ripped with lossless compression algorithms—all of these take up much more disk space than snapshots from a 3-megapixel camera, standard definition video, and standard MP3 files ever did. And although Apple now ships larger internal drives than in years past, Mac mini and laptop users can quickly find themselves running on empty, storagewise.

Even if you do manage to squeeze all your data onto your Mac's hard drive, you should know that OS X regularly uses available disk space as virtual memory. My MacBook Pro's virtual memory often gobbles up 10GB of empty disk space! If your hard drive is bursting at the seams, be aware that it might be causing your operating system to take a performance hit.

Pick a Drive

Now that we've established a few reasons you'd want to get your hands on some extra storage, the next question is: What to buy? There are three main decisions you'll need to make: internal versus external, portable versus desktop, and the type of connections.

1. Internal versus External

For many of you, your storage expansion options were limited the moment you chose which Mac to buy. Adding a second drive internally to any iMac, Mac mini, or portable Mac is simply not an option. Unless you're the owner of a tower Mac, your only storage expansion option will be to purchase an external drive.

For those of you who have the option of adding a second internal drive, you'll find the biggest benefit to be less cable clutter hanging off your Mac. Drives installed inside your Mac are also, naturally, less inviting to thieves. To install a drive, however, you'll need to know how to use a screwdriver, and you'll have to open the computer—which some people might find daunting.

2. Portable versus Desktop

Portable drives are usually bus-powered; they don't require a power cable in order to operate—handy for laptop users who want to use the device in places where electrical outlets are scarce. Portable drives are also relatively compact, fitting easily into carry-on bags and even some large clothes pockets. When it comes to speed, portable drives use the same 2.5-inch mechanisms found in laptop computers. These 2.5-inch drives usually spin at 4,200 or 5,400 rpm, which is considerably slower than the 7,200-rpm speed at which most 3.5-inch desktop drives spin. Portable drives also have a lower capacity than desktop drives (usually topping out at around 120GB), and they generally have a higher cost per gigabyte; you will pay around $2 per gigabyte, as opposed to around 90 cents or less per gigabyte for a desktop drive.

3. Connection Type

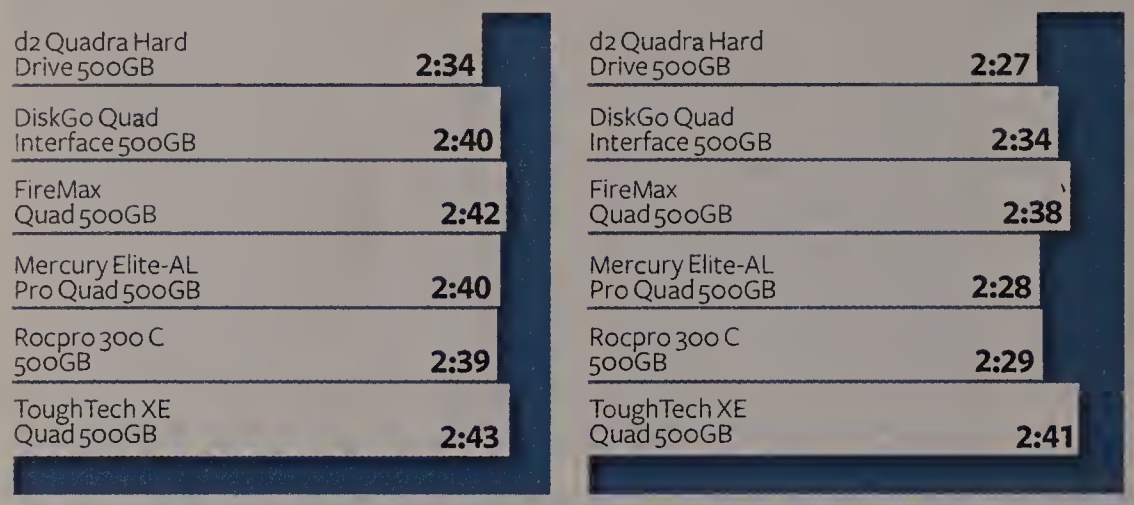
If you're in the market for an external drive, your next consideration should be the type of connection you'd like to use between the drive and your Mac. USB 2.0 drives are generally cheaper than those with FireWire connections, and USB ports are more commonplace than FireWire ports. On the other hand, you can't boot PowerPC-based Macs with a USB drive, and its performance will be considerably slower than that of a FireWire drive.

FireWire 800 is even faster than the original FireWire—now known as FireWire 400—but FireWire 800 ports are included only with the MacBook Pro, the Mac Pro, and the 24-inch iMac. FireWire 800 is backward-compatible with FireWire 400, but these two port types are not the same size, so you'll need a special adapter cable. Another factor to consider is that USB connections don't supply as much bus power as FireWire connections, and some USB drives require either an external power cable for portable drives or a second USB cable plugged into your computer for additional power.

One big reason to consider a quad-interface drive is that a new type of connector, external SATA (eSATA), has recently come onto the scene. With eSATA, you can get the impressive speed benefit of a SATA connection with an external drive. SATA's theoretical maximum transfer rate is three times as fast as FireWire 800—that is quite speedy, indeed. However, no hard drive can currently reach that maximum speed. Another potential hurdle for you to consider is that no Mac ships with an eSATA port. If you want to take advantage of eSATA speeds (or even add an internal SATA drive), you'll need an adapter card. Owners of Mac towers can install a PCI card, and MacBook Pro users can use an ExpressCard/34 adapter. MacBook, iMac, and Mac mini users unfortunately will have to make do with FireWire and USB speeds.

If you're having trouble deciding which connector you need, consider going with one of the six quad-interface desktop drives we review here. With a quad-interface drive, you'll get the ultimate in compatibility and flexibility: a USB connection, fast and bootable FireWire 400 and 800 connections, and the forward-looking eSATA technology.—JAMES GALBRAITH

Macworld Lab Test



Scores are in minutes:seconds. Shorter is better. Macworld's external hard-drive test suite consists of three individual tests: copying a 1GB folder to the external hard drive from the internal hard drive, duplicating that 1GB folder on the external drive, and using the external drive as the scratch disk for a low-memory Photoshop test. We ran those tests on each drive, connected via FireWire 800 and eSATA. Our test system was a 2.5GHz Dual Power Mac G5 with OS X 10.4.8 installed and 1GB of RAM. The score represents the sum of these three timed results. For individual test results of these drives, visit macworld.com/2630.—MACWORLD LAB TESTING BY JAMES GALBRAITH AND JERRY JUNG

all have more or less the same footprint. Likewise, all are powered by similarly sized external power supplies that plug into the back of the drive, with the power supplies for the FireMax and d2 Quadra drives being slightly bulkier than the others.

The DiskGo, Rocpro, and ToughTech XE drives all use the same enclosure design and have the same features—but they also lack the same features. For example, unlike the d2 Quadra, FireMax, and Mercury Elite drives, these drives are missing a separate, dedicated connector for FireWire 400. FireWire 800 is backward-compatible with FireWire 400, and the DiskGo, Rocpro, and ToughTech drives all ship with a FireWire 800-to-400 adapter cable. In the long run, this isn't a big deal.

As for USB connectivity, neither the d2 Quadra nor the Mercury Elite offers the miniature USB connector found on the other drives. But that's OK, because the larger connectors are easier to plug in. The back panel of the FireMax drive we received was slightly misaligned with the miniature USB port. While this was purely cosmetic and didn't hinder us from plugging in a USB cable, it gave us pause and made us wonder what else the manufacturer might have overlooked while assembling the drive.

All the drives we looked at lay flat, but the d2 Quadra and ToughTech drives include stands for positioning them vertically. The FireMax ships with a unique and intriguing "stand" that consists of two strips of shaped aluminum, which the drive sits on top of.

Since we believe that storage should be seen and not heard, we were pleased to discover that all the drives produced the same level of noise, which was not very much. With the exception of the d2 Quadra, all offer fanless operation, so all you'll hear is the faint, high-pitched whirring of the hard-disk mechanism when the drive is running. If you use your drive in a typical home-office setting, you probably won't notice it. To further quiet things, all the drives spin down when they have not been accessed for a time. Interestingly, the d2 Quadra has a switch on its back panel (On, Auto, and Off) for controlling its version of this feature. However, LaCie notes that the Auto mode doesn't work when the drive is using the eSATA port.

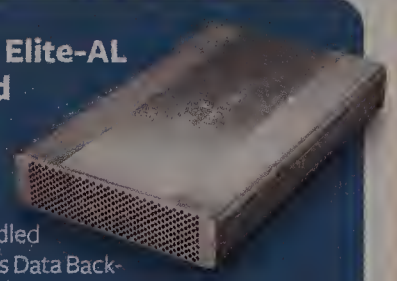
Few of these drives ship with software bundles: the exceptions are the d2 Quadra, which includes Retrospect Express 6.1 and LaCie's 1-Click backup software and SilverKeeper; and the Mercury Elite, which gives you Prosoft Engineering's Data Backup and Intech's Hard Disk SpeedTools.

Compatibility

Each drive is easy to set up—connect one to your computer, insert the appropriate cable into any of the four available ports, and power it on; it mounts immediately on the desktop. The Rocpro and DiskGo drives ship formatted for PCs, but fixing this is easy; perform a quick reformat in Apple's Disk Utility (/Applications/Utilities).

Using the eSATA port, most of the drives had no trouble booting our G5 Mac via the eSATA upgrade card we added. The sole exception was the DiskGo drive, which inexplicably failed to boot from the eSATA port. However, all drives did success-

Mercury Elite-AL Pro Quad 500GB



PROS: Bundled with Prosoft's Data Backup and Intech's Hard Disk SpeedTools; vertical stand.

CONS: No manual or documentation provided.

PRICE: $280

COMPANY: Other World Computing, www.macsales.com

FULL REVIEW: macworld.com/2555

Rocpro 300 C 500GB

PROS: Antishock enclosure; small power adapter.

CONS: Lacks a dedicated FireWire 400 connector; no slot for antitheft cable; no bundled software.

PRICE: $282

COMPANY: Rocstor, www.rocstor.com

FULL REVIEW: macworld.com/2556

ToughTech XE Quad 500GB

PROS: Antishock enclosure; small power adapter.

CONS: Expensive; no dedicated FireWire 400 connector; no slot for antitheft cable; no bundled software.

PRICE: $400

COMPANY: WiebeTech, www.wiebetech.com

FULL REVIEW: macworld.com/2557

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GOOD THINKING.

Flexible and Portable

When it comes to flexibility and options, you can find plenty of both in portable hard drives, too.

Case in point: the wallet-sized Apricorn **Aegis 80GB** (●●●●; macworld.com/2558) portable hard drive, which features a single FireWire 400 cable from which it also draws power. Because the cable is permanently attached to the lithe plastic chassis, you'll never be scrounging for data cables or a power adapter. The six-pin FireWire 400 cable tucks away into a recessed channel on the side of the drive when it isn't in use. This single-port strategy cuts down on extraneous bulk and weight.

While portable drives like the Aegis are physically smaller, and thus friendlier for powering from a FireWire or USB bus, they are also typically much slower than desktop drives. And they don't often have the space necessary to accommodate all the connectors of a quad-interface drive.

G-Technologies' **G-RAID mini 200GB** (●●●●; macworld.com/2559) gives you the best of both worlds: speedy performance rivaling that of desktop drives and a small design that's amenable to life on the road. Containing two 2.5-inch hard-disk mechanisms arranged in a RAID 0 (striped) configuration, it has a sleek aluminum enclosure and an integrated fan. And even with its two hard-disk mechanisms, the unit can operate while being powered via an available FireWire port.

fully boot from the FireWire 800 port, even the DiskGo. We experienced some initial hiccups with the ToughTech: using either FireWire port, the drive mounted intermittently, and it wouldn't boot from FireWire 800 unless we cycled the power on the drive. Fortunately, these problems didn't occur with the replacement drive that WiebeTech sent.

Performance

To test performance, we benchmarked each drive, using our standard test suite. We first plugged each drive into the FireWire 800 port and then ran the same tests again with the eSATA port. All the drives were generally speedy, offering similar performance across our range of tests, with the numbers representing the eSATA port generally being faster. Disappointingly, the promised speed of eSATA wasn't that apparent—it outpaced the FireWire 800 numbers by less than 10 percent. While connected to the FireWire 800 port, the drives demonstrated the most dramatic differences in the 1GB file-copy test: the slowest numbers belong to the Rocpro, which was a full 13 percent slower than the d2 Quadra in the same test. Other speed differences were subtle, with the ToughTech being nine percent slower than the Rocpro in our low-memory Adobe Photoshop test. The bottom line is that you're unlikely to see a tremendous benefit by using the eSATA port—at least according to our standard test platform, a Dual Power Mac G5 upgraded for an eSATA connection, with a PCI-X eSATA card from OWC.

Although SATA is faster than FireWire 800, you may not experience its full speed benefits in single drives like the ones in this review; where SATA technology really shines is in RAID (Redundant Array of Independent Disks) configurations. (For more information on multidrive RAID systems, see "Thinking Big: SATA Hard Drives," November 2006.) These modest speed gains, combined with the prospect of having to also buy an upgrade card to use the eSATA port, may lessen the appeal of a quad-interface drive. But what buying such a drive will give you is storage you can use today as you piece together a SATA RAID system for use later on.

Macworld's Buying Advice

For MacBook Pro users who need the utmost in storage speed, eSATA drives are the way to get there. However, as is also true with desktop Macs, after buying the drive you'll need to shell out more money for an eSATA expansion card.

In this review, the LaCie d2 Quadra Hard Drive is the winner, for its overall speedy performance, superior software bundle, and additional features. Running close behind the d2 Quadra is the OWC Mercury Elite-AL Pro Quad, with its sleek aluminum styling, vertical stand, and low price, and the Rocstor Rocpro 300 C, which lacks a slot for an antitheft cable, but is available in a wide range of capacities.

Jeffy Milstead is a former Macworld Lab analyst and a writer living in San Francisco.

Quad-Interface Hard Drives Compared

Product	RATING	PRICE[A]	CONNECTORS	DIMENSIONS (L x W x H)	INCLUDED BACK UP SOFTWARE
d2 Quadra Hard Drive 500GB TOP PRODUCT LaCie www.lacie.com	●●●●½	$290	eSATA, FireWire 400, FireWire 800 (2), USB 2.0	6.3 x 6.8 x 1.7	1-Click, Silver-Keeper, Retrospect Express 6.1
DiskGo Quad Interface 500GB Edge Tech www.edgetechcorp.com	●●●	$285	eSATA, FireWire 800 (2), USB 2.0	9.0 x 5.5 x 1.75	none
FireMax Quad 500GB ProMax www.promax.com	●●●	$399	eSATA, FireWire 400, FireWire 800 (2), USB 2.0	7.4 x 4.6 x 1.4	none
Mercury Elite-AL Pro Quad 500GB OWC www.macsales.com	●●●●	$270	eSATA, FireWire 400, FireWire 800, USB 2.0	9.0 x 5.8 x 2.1	Data Backup, Hard Disk SpeedTools
Rocpro 300 C 500GB Rocstor www.rocstor.com	●●●½	$282	eSATA, FireWire 800 (2), USB 2.0	8.8 x 5.2 x 1.4	none
ToughTech XE Quad 500GB WiebeTech www.wiebetech.com	●●●	$400	eSATA, FireWire 800 (2), USB 2.0	9.0 x 5.3 x 1.5	none

All drives in this table have a rotation speed of 7,200 rpm. [A] All prices shown are the manufacturers' suggested retail prices.

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-Nathan Miles

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-Neil Kesterson

• "I'd like to say THANK YOU to Prosoft Engineering for Data RescueII! It saved my business!!"
-Laine Anderson

• "Thanks !!!! A gift. Nothing else even came close to even seeing my files!!!"
-Michael Caufman

• "Your product saved my entire corrupt hard drive. Thank you Prosoft Engineering!"
-Tom Sommerseth

• "Data Rescue by Prosoft Engineering really saved my bacon."
-Randy Burleson

• "The best $100 I've ever spent! MUCH BETTER THAN FLOWERS!!!"
-Bruce Mentzer

• "Your product is the best I have ever seen and works exactly like you say;"
-Carmela Garcia

• "In a word, TAH-DAH!!! It's like *magic*! I really thought everything on my drive was gone. Data Rescue got it back!!"
-P.A. McEwin

• "Data Rescue II does exactly what it says on the box."
-James Wright

• "From panic to calm all thanks to Data Rescue."
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Inside QuickTime Pro's Bag of Tricks

This upgrade takes you from the audience to the editor's chair **BY TED LANDAU**

At some point, most Mac users have probably whiled away a few company minutes watching Apple's QuickTime movie trailers. But QuickTime can do much more than just bring you the latest *Spider-Man 3* teaser. Apple's QuickTime Player application is a surprisingly feature-packed utility capable of recording and editing movies, and even handling a few video effects. The key to realizing its power is to fork over $30 at the Apple Store (www.store.apple.com) and upgrade to QuickTime 7 Pro.

Make Your Own Videos

After you do that, you'll notice that QuickTime Pro has made QuickTime Player better. You can play videos in full-screen mode and save movie trailers downloaded from the Web.

And now you don't have to be relegated to the role of audience member. Combining QuickTime with Apple's iSight gives you an instant recording studio. To record a movie, select either New Movie Recording or New Audio Recording from the File menu. Click on the record button, and you're on your way to becoming the next Scorsese. (Or not.)

The iSight is useful if you're making a talking-head recording of yourself for a podcast or a personal video message. But QuickTime Pro can also accommodate camcorders, Web cams, or any combination of camera and microphone. Just connect the camera to the Mac, and QuickTime should recognize it. You can record directly from the camera or play back captured material and record that.

Of course, you *could* use iMovie to do the same thing. But if you just want a simple movie—for instance, one that you can quickly post to a Web site—QuickTime Player is generally faster and requires less effort. It also has some capabilities that even iMovie doesn't have.

Combine Movies

Despite its simple interface, QuickTime Player provides some pretty powerful editing tools. For instance, you can delete a segment from a movie or combine clips from two different videos. Let's walk through an example that intercuts footage from a piano recital with clips from a second video—one that depicts the admiring audience.

Nab the Footage Start by opening the secondary video (in this example, the audience movie) and summoning the Movie Properties window (Window: Show Movie Properties). In the track list at the top, highlight Video Track, and then click on the Extract button. A new version of your movie will appear, containing the video track without sound (see "Creative Options in QuickTime").

Next, it's time to mark off the footage you want to paste into your main video. In the extracted video track, click on the movie timeline to bring up a pair of tabs, called in and out markers. Move the left marker to the beginning of the footage you want to grab, and the right marker to the end. Alternatively, you can make a selection by moving the playhead to the start of the footage you want and pressing the I key, and then moving the playhead to the end and pressing the O key.

Whichever method you use, you can fine-tune the placement of your markers by using the left- and right-arrow keys to step through the footage, frame by frame. When you've finished marking your footage, select Edit: Copy to store it on the Clipboard.

Add Your Footage Open your main video (in this case, the performance movie). Move the playhead to the point where you want to insert the audience footage, and select Edit: Add To Movie. This is preferable to using the Paste command because the added clip ends up *overlaying* a section of your performance video while leaving the original audio intact. The movie's overall length remains the same, and you continue to hear the piano play even while watching video of the audience reaction.

ILLUSTRATION BY MICHAEL KLEIN; ICON BY PAUL HOWALT

(Using Paste simply adds the new video, along with its associated sound, to the middle of your movie.)

Let It Scale You can also get a little more exact with your cuts. For instance, say there's an eight-second segment in your performance video where you accidentally jostled the camera and lost focus, yet the audience clip you want to replace it with is nine seconds long. By using QuickTime Pro's scaling capabilities, you can nudge that nine-second clip into a shorter space.

First, use the in and out tabs to mark off and copy the nine seconds of footage from your audience video. Next, go to the performance video and use your markers to define the eight-second segment you want to overlay. Select Edit: Add To Selection & Scale.

When you apply this command, QuickTime Pro *scales* (speeds up or slows down) the inserted segment so that it matches the length of the marked clip. This technique works best, of course, if both segments are approximately the same length; that way, speed changes aren't too noticeable.

CHECK IT OUT

Watch the World Go By

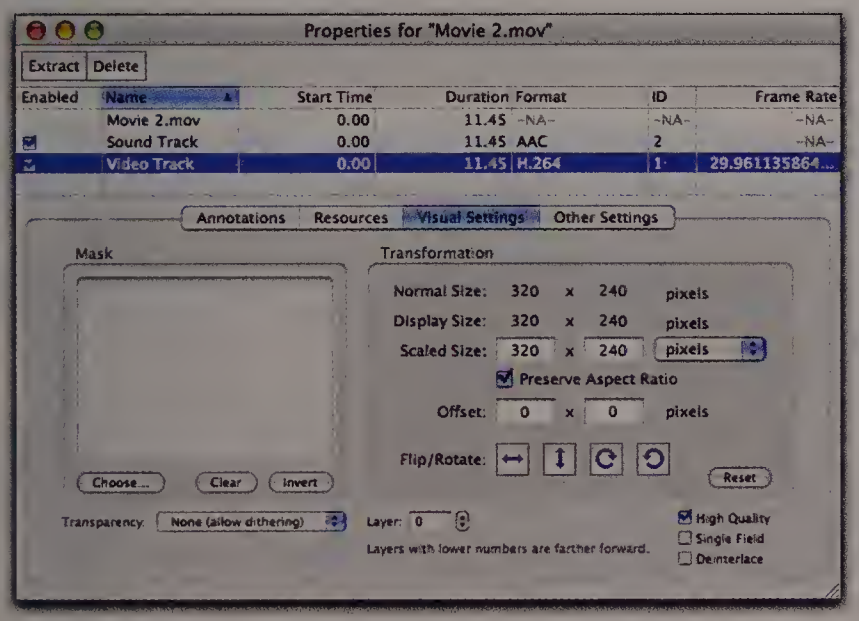
Storm watchers and space nuts alike will get a kick out of Xeric Design's $20 EarthDesk 4.0 (www.xericdesign.com). With this beautiful view of Earth on your desktop, you can see weather patterns and daylight move as the planet spins. As long as you have an Internet connection, the cloud-cover image is updated every three hours, to give you a living picture of the atmosphere. And EarthDesk shows you current daylight conditions (it bases this information on the time and date set in your computer). You choose how frequently the image updates, from every minute to every half hour. Center the picture on your favorite city, choose from 11 different projections (Equirectangular or Mercator, for example), turn moonlight on and off, or view political boundaries. An optional menu-bar item provides easy access to all of the program's controls.—SCHOLLE SAWYER McFARLAND

EarthDesk 4.0 With EarthDesk on your desktop, you can keep track of who's greeting the sun even as you get ready to head home from work.

Create Picture-in-Picture

Sometimes it's hard to figure out where to focus your movie. For instance, what if your pianist crescendos to a particularly impressive set of chords, yet you also want to show the audience clapping? Luckily, you don't have to decide: using QuickTime Player, you can produce a picture-in-picture effect that showcases both subjects—the pianist in the main window, and the audience in a small corner window. The key to this effect is QuickTime Pro's ability to handle layers—something even iMovie can't do.

Reveal the Window Employ either the Add To Movie or the Add To Selection & Scale command, as described previously, to insert your audience clips into the performance movie. Then bring up the performance video's Movie Properties window and select one of the tracks you've inserted (they will be named Video Track 2, Video Track 3, and so on).



Creative Options in QuickTime You'll find most of QuickTime Player's moviemaking tools in the Properties window.

In the Visual Settings tab, locate the Scaled Size dimensions. Decrease the first pixel number to about one-third of the original size, and make sure the Preserve Aspect Ratio option is selected (it is by default). This should shift the second number accordingly. Your inserted audience clip will now appear in a small window in the upper left corner of your movie. To reposition the window, play around with the Offset settings.

Make It See-Through If you don't want to completely obscure the corner of your main video, you can make the picture-in-picture clip translucent. Under the Visual Settings tab, go to the Transparency pop-up menu (located at the lower left) and select Blend. A Transparency Level slider will appear. Move it toward 100% to increase transparency, and toward 0% to decrease transparency.

Make a Mask

To add a little visual interest to your movie, consider breaking it out of its rectangular box and placing it inside an oval or a circle. To accomplish that, you'll need to create a video mask, which lets you frame your movie

inside a certain shape (see "Make a Video Mask").

Quick and Dirty Masking Start by opening any graphics-capable program, such as the $649 Adobe Photoshop (www.adobe.com), Apple's Pages (part of the $79 iWork suite; www.apple.com), or The Omni Group's $80 OmniGraffle (www.omnigroup.com). Draw a solid black oval, circle, or whatever shape you want against a white background. This shape represents your mask, so make sure it's big enough to accommodate the main action in your video.

Next, take a screen capture of your mask. Press ⌘-shift-4, and then drag a frame around your drawing to take the screenshot. Make sure it's about the same size as the frame of your movie. Open your video in QuickTime Player and call up the Movie Properties window. Highlight Video Track; then select the Visual Settings tab. Drag your screen capture from the Finder straight into the Mask box on the left side of the window. The next time you play your movie, the picture should appear within the mask area.

Gussy Up Your Mask Now that you know how to create a simple mask, it's time to get more creative. Building upon your mask video, you can add a still image, a slide show, or a movie in the background. Imagine using this effect for something like a movie-review podcast: your Ebert-esque commentary video plays within the mask, while clips from the film appear in the background.

To accomplish this, open the movie you want to use as your background and, yet again, bring up the Movie Properties window. Highlight Video Track and click on Extract. Select the entire extracted track (Edit: Select All) and copy it to the Clipboard. Next, open the movie that contains the mask and choose Select All again so that the in and out markers span the movie's entire length. Choose Edit: Add To Selection & Scale. At this point, you will most likely see the background movie and nothing else. Don't worry! All you need to do is move the background behind the mask layer.

Return to the Movie Properties window, and highlight the track that corresponds to the video you added (most likely Video Track 2). In the Visual Settings tab, locate the Layer box at the bottom of the window and use the up arrow to increase the number listed there until the mask becomes visible. Done! Save your work, play your movie, and enjoy.

Make a Video Mask Once you've upgraded to QuickTime Pro, you can use some complex effects. Here, a video plays inside a mask *within* another video.

Senior Contributor **Ted Landau** is the founder and a current contributing editor of MacFixIt (www.macfixit.com), as well as the author of *Mac OS X Help Line* (Peachpit, 2007).

More QuickTime Tricks

QuickTime Pro's abilities go far beyond what this article describes. To explore its many other functions, check out the program's Help menu or visit Apple's tutorial page at macworld.com/2511. For starters, here are a few other noteworthy tricks:

1 Try Special Effects You can add various filters and effects, such as Emboss, Blur, and Film Noise, by using the options in File: Export. Choose Movie To QuickTime Movie from the Export pop-up menu. Click on the Options button and then on the Filter button, and select the filter or effect you want to apply.

2 Add Some Text Got something to say? QuickTime Pro lets you add text overlays to your video. Open TextEdit (or another text editor), type your captions, and copy the text to the Clipboard. In QuickTime Player, use the in and out markers to define the segment that goes with the text. Select Edit: Add To Selection & Scale.

To tweak the look of your text overlay, go to the Movie Properties box, choose Text Track, and select the Visual Settings tab. To make the text box semitransparent, choose Blend from the Transparency pop-up menu. To adjust the box's size and location, tweak the Scaled Size and Offset values.

3 Use Slide-Show Smarts It's easy to create a QuickTime slide show. Simply place a bunch of images in a folder and give each file the same name, followed by a sequential number (for instance, Hawaii1, Hawaii2, and so on). Go to File: Open Image Sequence, navigate to the folder of images, and select the first picture in the sequence. Click on Open. From the Frame Rate pop-up menu, choose a setting, such as 1 frame per second or 5 seconds per frame, and click on OK. Go to View: Play All Movies to admire the results.

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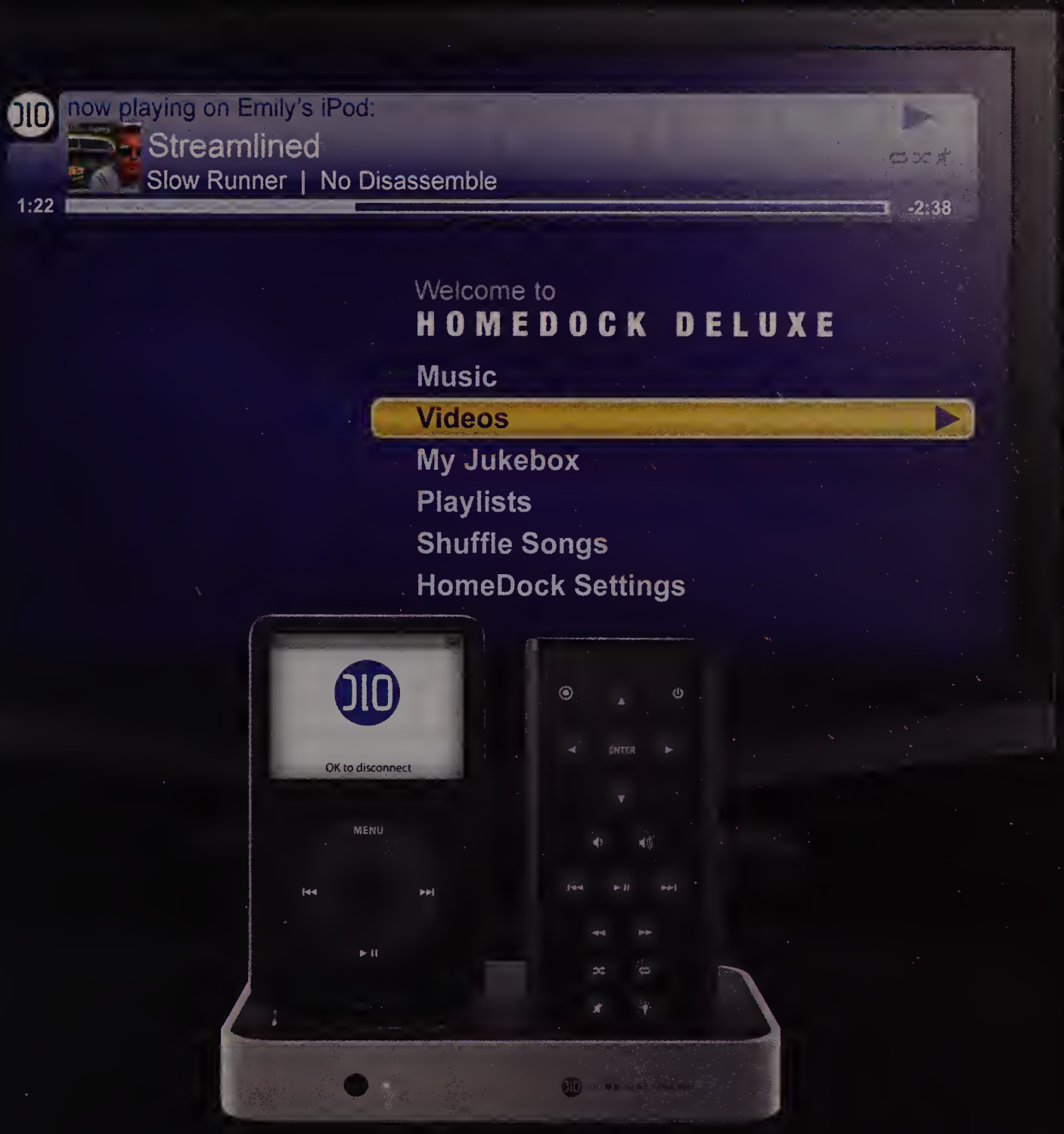

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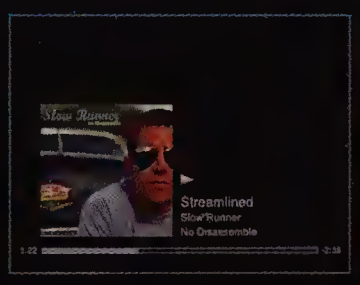

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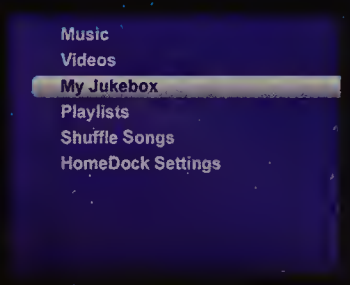

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DIGITAL LIFESTYLE OUTFITTERS

Convert Video for Your iPod

Turn your DVDs and other videos into iPod-compatible files **BY JONATHAN SEFF**

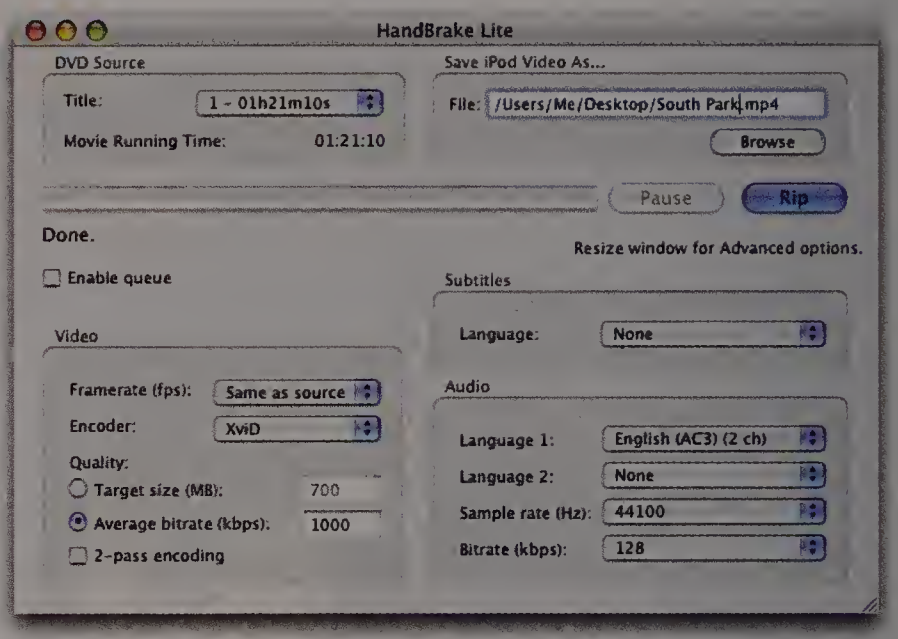
With its ever expanding catalog of movies and TV shows, the iTunes Store is a great place to stock up on video content for an iPod. But why spend your hard-earned money there when you already have a vast collection of DVDs, iMovies, and other video files at your fingertips? With the help of some free software, you can convert these videos into iPod-compatible files.

Rip Movie DVDs

Let's say that you purchased a movie on DVD, and that you want to convert it to watch on your iPod. Because ripping commercial DVDs circumvents the copy-protection system employed on these discs, the legality of the process is questionable—even if you own the DVD and are ripping it only to watch it in another form. You'll have to assess these risks for yourself. If you decide to take the plunge, read on.

Scanning the Disc If you intend to watch the video solely on your iPod, download Tyler Loch's free HandBrake Lite 1.1 (HandBrake Lite 0.7.0, ●●●½; macworld.com/2484), a simplified version of the full HandBrake software (discussed later). To rip a DVD, pop the disc into your drive and launch HandBrake Lite. Click on the Open button, and the program will scan the disc for video data.

HandBrake Lite might not be able to read the disc (this sometimes occurs with recent DVDs that have special copy protection). If you see the message "No Valid Title Found," download a copy of MacTheRipper, a utility that is more adept than HandBrake Lite at bypassing DVD copy protection (its Web site has moved several times, so do a Google search if you need it). Once you've used MacTheRipper to create an unencrypted version of your DVD on your hard drive, launch HandBrake Lite. In the sheet that appears, choose the VIDEO_TS Folder Or Disc Image option. Navigate to the VIDEO_TS folder of the disc you've extracted.



HandBrake Lite This simplified version of HandBrake lets you rip movies so you can view them on an iPod.

Start Ripping Once HandBrake Lite has scanned the disc (or the VIDEO_TS folder if you've used MacTheRipper), it presents you with a list of items in the Title pop-up menu (see "HandBrake Lite"). The titles will appear as digits and times that correspond to discrete elements such as the movie, bonus interviews, the making-of documentary, and so on. Pick the title you want to convert—the movie is the item with the longest duration. In the File window on the right side of the interface, give your file a name and specify a location in which to save it. Click on the Rip button and go for a walk—the process can take a while, depending on the length of the video and the speed of your Mac. The resulting file will be formatted perfectly for your iPod's screen.

If you're unhappy with the way your finished movie looks when you use the default conversion settings—or if you'd like a little more control over encoding the disc—check out HandBrake Lite's advanced options (to expose them, click on the green maximize button in the upper left corner of the window).

Rip TV-Show DVDs

If you're ripping a DVD that contains an entire season of TV shows, your best bet is to use the free application Instant HandBrake (macworld.com/2468). Don't let its generic icon fool you—Instant HandBrake is the easiest way to convert multiple files from a DVD (you can also use it for movies, although it tends to produce larger files than HandBrake Lite).

Insert a DVD, open it in Instant HandBrake, and wait for the application to detect the various titles on the disc. To rip all the episodes, find all the titles that are similar in length (around 22 minutes for a half-hour show and 43 minutes for a one-hour show); then click on their check boxes (see "Instant HandBrake").

Under the titles is a list of settings. The File Format pop-up menu features

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two iPod presets: iPod 5G (H.264) and iPod 5G (MPEG-4). Stick with H.264, as choosing MPEG-4 will result in a larger file. From the Picture Format pop-up menu, choose Original to maintain the video's aspect ratio. Finally, make sure to pick your language from the Preferred Audio pop-up menu (it may not always default to English, so pay close attention). Click on Convert, and then sit back and relax while Instant HandBrake does its thing.

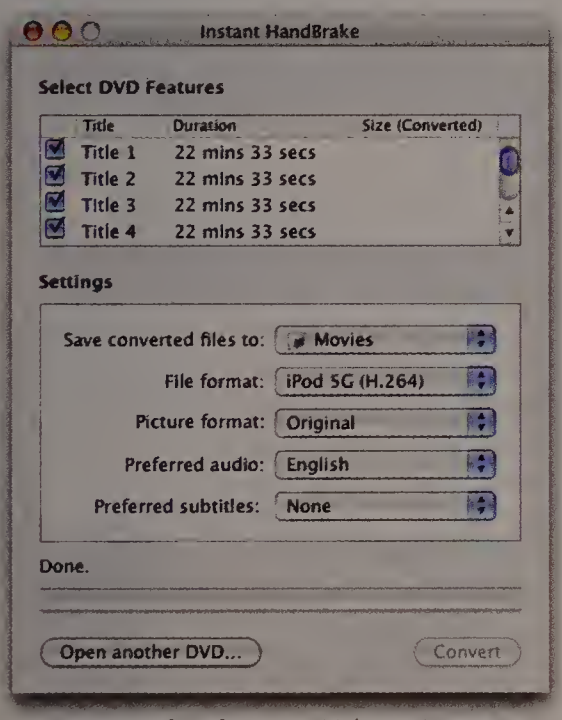
Videos for the Big Screen

Video iPods support higher-resolution files than you see on their screens, so you can encode videos that will also look great when played back on a TV (via the iPod or the Apple TV, for example).

The aforementioned ways of ripping a DVD won't give you the best results on a large screen; however, with a little tinkering, you can create video files that look great on both your iPod and your TV.

Pick Your Settings Start by downloading HandBrake 0.7.1 (macworld.com/2468). Insert the DVD, wait for HandBrake to scan it, and then choose the longest title on the disc from the Title pop-up menu.

Set HandBrake's File Format pop-up menu to MP4 File and its Codecs menu to MPEG-4 Video/AAC Audio if these options aren't already selected. In the Encoder pop-up menu, leave the FFmpeg setting and enter **2,200** in the Average Bitrate field. Select your language from the Language 1 pop-up menu. To improve video quality, you can enable 2-Pass Encoding, which analyzes the video and adjusts data rates according to the complexity of particular scenes.



Instant HandBrake For TV shows, Instant HandBrake's title detection and batch processing make quick work of converting a DVD for iPod viewing.

Maximize Video Dimensions According to Apple's specifications, iPod-compatible MPEG-4 movies can have a maximum resolution of 640 by 480 pixels and a maximum bit rate of 2,500 Kbps—but the iPod can actually play movies with higher resolutions than Apple lets on. That's because it limits movies not by frame size but by 16-by-16-pixel blocks called *macroblocks*. MPEG-4 movies can contain as many as 1,200 macroblocks (307,200 pixels). To calculate the maximum resolution for your movie, divide the pixel height by 16, divide the pixel width by 16, and then multiply those two numbers. If the final result is less than 1,200, you're in business.

Now you can click on the Picture Settings button, make sure the Keep Aspect Ratio option is selected, and adjust the number in the Width field (the program will fill in the height for you) until your resolution is just under 1,200 macroblocks. When you're done, click on Close. Go to the main HandBrake window, name the movie in the File field, and choose the location you'll save it in by clicking on the Browse button. Click on the Rip button to encode your movie.

Set Up TV DVDs If you're ripping TV shows, you'll need to perform a few extra steps. First, select Enable Queue at the bottom of the HandBrake window. Then, for each episode, select its title, give the file a name, adjust the settings as described previously (for standard shows, you shouldn't need to make any Picture Settings adjustments, but for wide-screen programs, you might), and click on the Add To Queue button. When you've finished, click on Start to begin encoding all the files in your queue.

Convert Hard-Drive Videos

Of course, videos are not limited to DVDs. Your Mac's hard drive is probably brimming with video files you would like to have on your iPod. For quick and easy conversions, check out Techspansion's free iSquint 1.5 (www.isquint.org). It's fast, it handles most file types with ease, and the videos it produces don't hog precious iPod space (these are problems you can encounter when you use QuickTime to export files to an iPod format). If you're going to view the videos only on your iPod's screen, use iSquint's Optimize For iPod setting and leave the Quality setting at Standard. Drag the video you want to convert to the iSquint window, and click on the Start button.

If you want video that will also look good on a television screen, select the Optimize For TV option. This will create a file with the largest frame size possible within the iPod's playback limitations. If you're not happy with the results, you can always increase the Quality setting, or click on the Advanced button and tweak the frame size, bit rate, and so on.

Jonathan Seff is *Macworld*'s senior news editor.

Tag It

Once you've encoded your files, it'd be nice if they showed up on your iPod as nicely organized as if you'd purchased them from the iTunes Store. But they're not going to unless you tag each file. You *could* use iTunes to add tag information like season, episode name, and number, but its interface for this job isn't great.

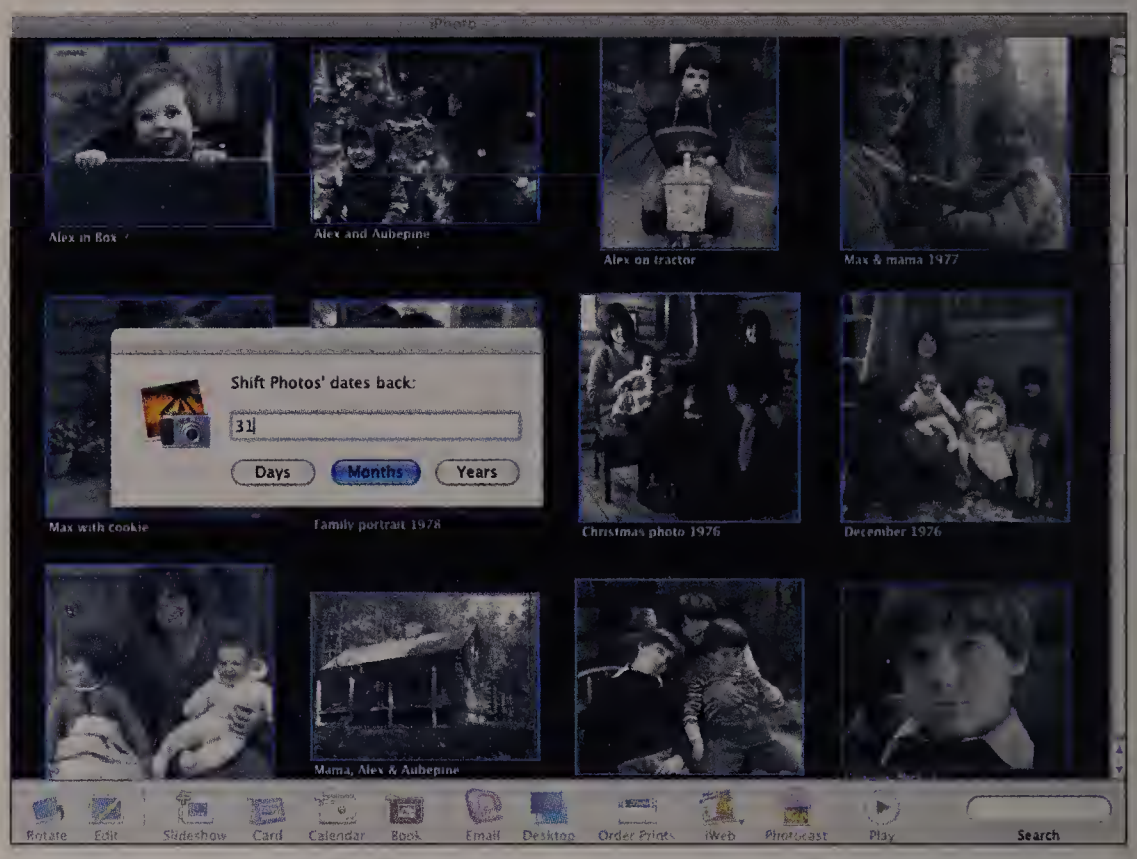
A better solution is to use a program to tag files before you import them into iTunes. My favorite application for this purpose is Parsley is Atomically Delicious 1.5 (Parsley is Atomically Delicious 1.3.3, ♦♦♦♦; macworld.com/2485), James Huston's free graphical interface for the command-line MP4 metadata editor AtomicParsley. Use Parsley to tag TV shows, movies, and music videos with all the necessary info so they show up in the right place on your iPod.

Find Photos Fast

iPhoto's calendar tools make locating snapshots easy **BY DERRICK STORY**

When you first started building your iPhoto library, you could quickly scroll through your photos to find what you were looking for. But if you've been taking photos for a couple of years, your library may now contain hundreds or even thousands of photos. That's a lot of scrolling.

There's an easier way to find what you're looking for. Even better, it doesn't involve adding keywords, writing captions, or changing file names. In fact, your camera does almost all the work for you. Sound too good to be true? Take a closer look at iPhoto 6's Calendar pane.



Date Change The time stamp on these photos reflected when the photos were scanned, not when they were actually taken. But it's easy to correct them with Joe Maller's iPhoto Date Shifter AppleScript.

Keep Accurate Time

Before you can take advantage of iPhoto 6's powerful calendar tools, you have to make sure that your images have the correct dates associated with them.

Each time you snap a photo, your camera stamps it with the current time and date. A new camera usually prompts you to set its internal clock the first time you use it. But if you skipped this stage, all your images' dates may be wrong. Even if you did set your camera's clock, there are plenty of ways for its timing to get thrown off. For example, did you remember to adjust for the time-zone change during your trip to Australia? And if your camera's batteries are dead for too long, the clock may even revert to its factory settings—putting your photos months or years in the past.

To make tracking down problem photos easier, sort your library by date (View: Sort Photos: By Date) and look for photos that appear out of order. To see the date and time associated with a photo, open its Information pane by clicking on the *i* button at the bottom of the Source pane. If you have just one or two photos with the wrong date, you can fix them here. With the photo selected, simply click on the Date field and enter the correct day, month, and year.

If you need to change a lot of photos, turn to Joe Maller's clever iPhoto AppleScripts collection, which includes iPhoto Date Shifter (www.joemaller.com/iphoto).

Once you've downloaded the scripts, install them in your AppleScript menu. If you haven't used AppleScripts before, launch AppleScript Utility (/Applications/AppleScript) and select the Enable GUI Scripting option, the Show Script Menu In Menu Bar option, and the Show Library Scripts option. You should now see the AppleScript menu (it looks like a scroll) in your menu bar. To install Joe's iPhoto AppleScripts, click on the AppleScript menu, select Open Scripts Folder: Open User Scripts Folder, and drag Joe's iPhoto AppleScripts into the Scripts folder.

To start putting these AppleScripts to work, select a batch of photos that are all mislabeled by the same amount of time. Go to the AppleScript menu and select Joe's iPhoto AppleScripts: iPhoto

Year at a Glance

TIP Want to see every photo you took last year? There's no need to open the Calendar pane. Just click on the arrow to the left of the Library entry at the top of the Source pane. iPhoto will reveal a series of calendar icons that represent the last few years. Clicking on any one of these calendar icons will bring up all the photos from that year. Hold down the ⌘ key to select multiple years.

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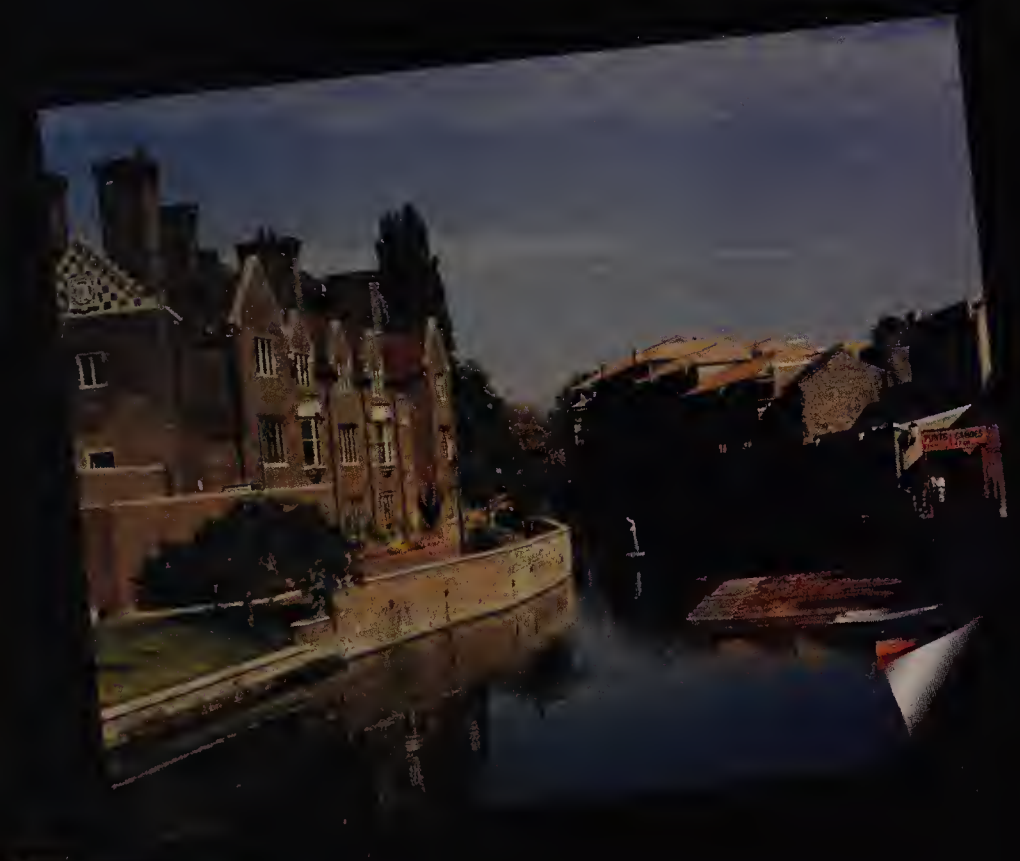

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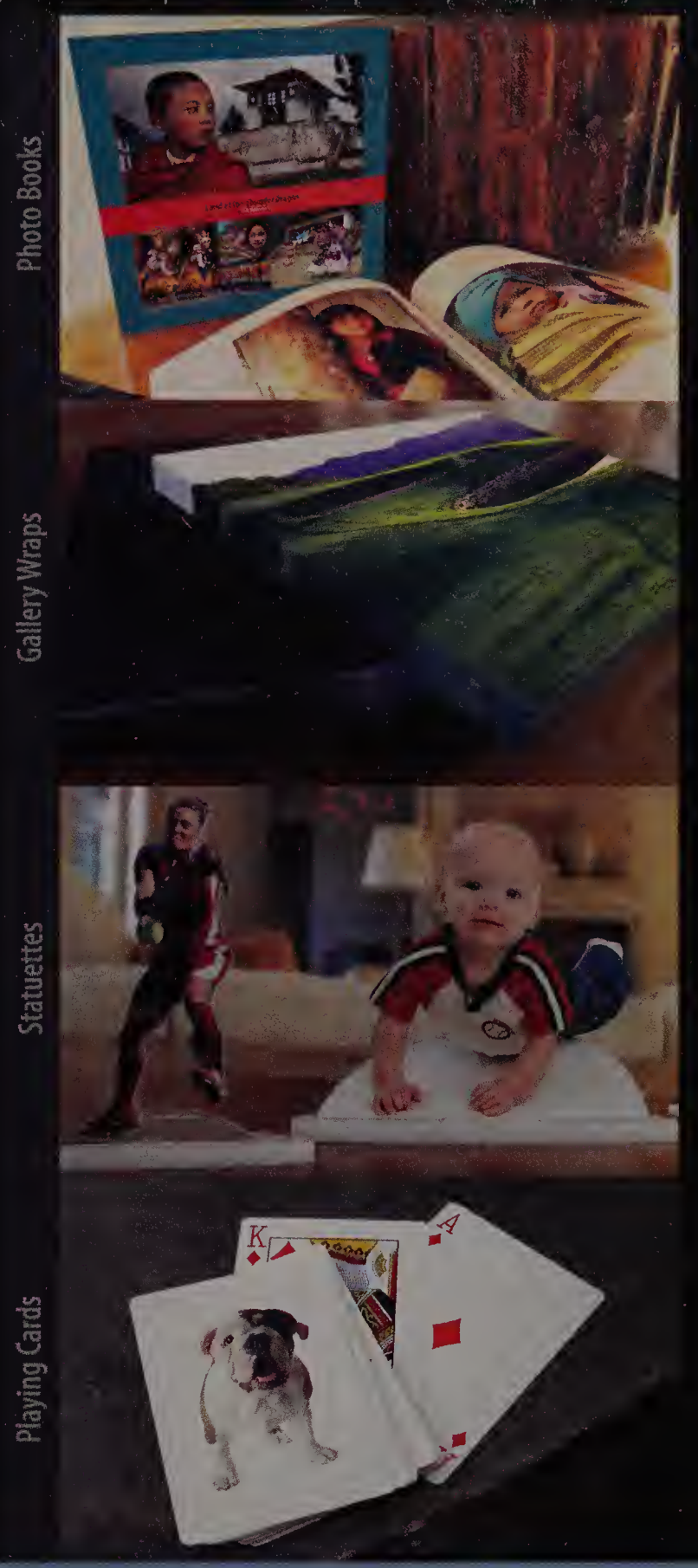

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Date Shifter. Indicate whether you'll be moving the date forward or backward, and then enter the number of days, months, or years by which you want to shift the date. If you want to undo the correction, use the iPhoto Date Reset script, included in the same package.

Make a Date with the Calendar Function

Once you're confident that you have accurate dates for all your photos, you can take advantage of iPhoto's Calendar pane to quickly find photos captured during an important event, or to group photos taken on multiple days.

Navigating the Calendar To access the Calendar feature, click on the calendar icon at the bottom of the Source pane. To switch between year and month views, click on the triangle icon in the upper left corner of the Calendar pane, or double-click on the name of a month.

The up and down arrows on either side of the Calendar heading let you navigate to a different year or month, depending on the view you're in. (Even better, if your mouse has a scroll wheel, you can use it to quickly scroll through either calendar view). By default, the Calendar pane displays only one month or year at a time. To expand the view and see multiple years or months at once, click and drag the dot above the Calendar heading upward.

While going through the calendar, you may notice that some dates are bolded and some aren't. The bolded dates indicate that your library contains photos taken on that day. The same thing goes for bolded months in the year view.

Smart Selections Want to see every image taken on your daughter's birthday in May 2005? Select your library in the Source pane (this tells iPhoto to search your entire collection), and open the Calendar pane in year view. Scroll to the 2005 calendar and double-click on May to switch to the month view. Next, select the day of your daughter's birthday. All the images recorded that day will appear in the thumbnail pane.

The calendar pane allows more-complex searches. For example, if the birthday festivities lasted for more than a day, simply ⌘-click on additional dates to add the photos from those days to the group. Want to see photos from *every* birthday your daughter has had over the years? Option-click on the date, and iPhoto will collect photos taken on that day in any year.

To clear your selection, click on the *X* in the upper right corner of the Calendar pane. To quickly jump to the current date, click on Calendar.

Once you've located the photos you want, place them in a new album so you can use them in a book or another project. Select all the images by pressing ⌘-A, and then choose File: New Album From Selection.

Get Even Smarter

You can also use your photos' time stamps to set up interesting smart albums. Say you want to create a photo book documenting your family's summer activities. Create a smart album (File: New Smart Album) and set the pull-down menus to Date Is In The Range Of. Fill in the start and end dates—for example, 6/1/2006 to 8/30/2006. iPhoto will scan your library and collect all the photos taken during that time period. Later, if friends or family members send additional photos that fall within that range, they will be included in the collection.

You see—your iPhoto library is more organized than you thought.

Calendar View Click on the calendar icon (A) to open the Calendar pane (B). To view photos taken on three different days in October, I ⌘-clicked on the dates (highlighted in blue). Only the bolded dates have pictures associated with them. Click on the *X* (C) to clear the selection.

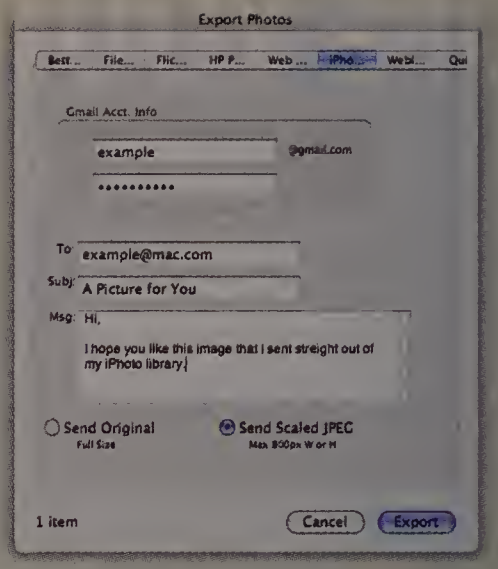
CHECK IT OUT

iPhoto Meets Gmail

iPhoto lets you send pictures via e-mail programs such as Mail, Entourage, AOL, and Eudora—but not Google's popular Web-based e-mail service, Gmail. And even with the programs it supports, iPhoto doesn't actually *send* the e-mail. It merely opens a new message that has your photos attached.

But thanks to Juan I. Leon, Gmail users can now send pictures directly from iPhoto without ever opening their e-mail client. All they need is the free iPhoto2Gmail plug-in (macworld.com/2538).

Once you've installed iPhoto2Gmail, you simply select your pictures in iPhoto, choose File: Export, and select iPhoto2Gmail. Then address your e-mail and click on the Export button. Your images will immediately be delivered via your Gmail account.



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ICON BY PAUL HOWALT

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Three for the Road

Expert tricks for getting more from your Mac laptop

If you travel with any regularity, chances are you have your favorite tricks for making each trip go as smoothly as possible. And if you take your Mac along, you no doubt have a few tried-and-true ways to make sure you can use it productively despite iffy power supplies, glitchy Wi-Fi connections, and crowded airplane seats. Here are a few more techniques to add to your repertoire, from three of our mobile Mac experts.

Back Up on Your Digital Camera

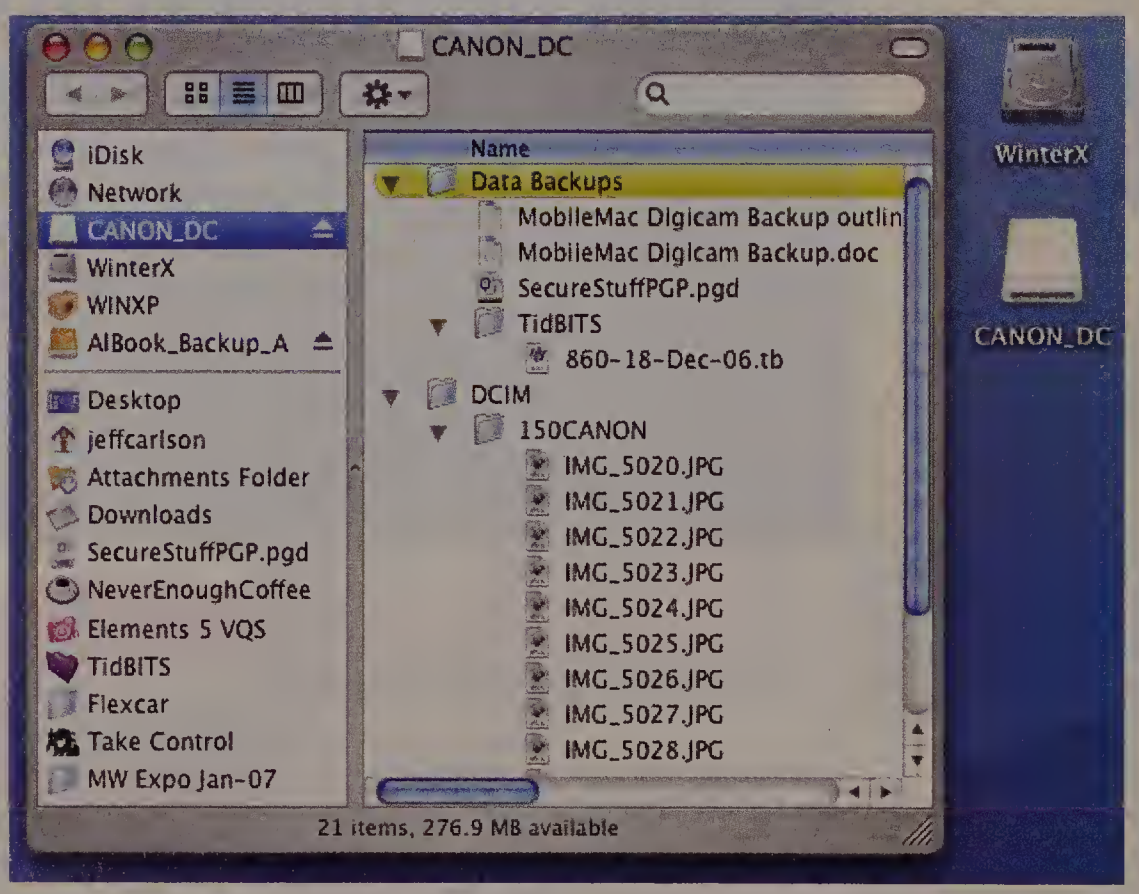
I recently learned the hard way that the fanciest backup system in the world won't help if you can't get to the data when you need it. While I was traveling in Montana, an important work file on my MacBook Pro became corrupted. I'm fairly rigorous about backing up my data, so I had a pristine version of the file—at home, two states away, on a disconnected external hard drive.

I can prevent this from happening again by backing up my important files as I travel—but to what medium? A portable hard drive would be the easiest option, but it would also add weight to my bag. A USB memory stick would be another good bet, but they're easy to lose (and would be yet another gadget to cart around). Storing everything on CD is fairly convenient, but I don't like carrying around stacks of blank discs.

The most convenient solution was hiding in something I was already carrying: my digital camera. Flash memory cards are spacious and inexpensive; 2GB CompactFlash or Secure Digital cards are available for less than $50, and you can purchase cards with capacities of up to 8GB. I typically don't fill a card with digital photos before off-loading them, so it should have plenty of room for backing up critical data.

When I connect the digital camera via USB to my Mac, iPhoto launches to import the images—but the card also appears on the desktop as a volume that I can transfer files to. My digital camera creates its own folders for storing its images, so as long as I don't mess with those, I can copy files to and from that volume with ease.

To make the connection between the Mac and the flash memory card, I can use either a USB cable or a memory-card reader. Card readers usually read several media-card formats, cost less than $100, and come in ExpressCard (for MacBook Pros) and PC Card (for PowerBooks) configurations.—**JEFF CARLSON**



Flash Memory Card in the Finder When you plug your digital camera into your Mac, its flash memory storage card appears on your desktop as a volume that you can back up your files to.

Save Money on Hotel Calls

Tired of paying big bucks for phone calls from hotels when you're on the road? Try using the Internet instead.

Many hotels now offer free Internet access (wired or Wi-Fi) from their guest rooms or lobbies. Compare that with the exorbitant rates they charge for phone calls, and you'll see how you can save some real money, particularly if you travel a lot or make many calls.

When it comes to voice over IP (VoIP) services for the Mac, the most popular options are Skype (www.skype.com) and Gizmo Project's Gizmo (www.gizmoproject.com). While there are other VoIP applications for Mac OS X, Skype and Gizmo are among the few that offer inbound and outbound calling ser-

vices, and they're both comparatively easy to configure.

Both Skype and Gizmo let you place calls over the Net to other users of their respective networks for free, both charge for calls to regular land-line phones or cell phones, and both offer flat monthly and yearly rates for inbound telephone calls. Skype charges $30 a year for unlimited calls to the United States and Canada via SkypeOut; calls to most other developed countries cost a few cents per minute. SkypeIn, for inbound calling, is about $40 per year per number. Gizmo charges one cent per minute for outbound calls to the United States and Canada, and rates start at $35 per year for Gizmo Call In. Gizmo also offers free calls to the land-line phones and cell phones of registered Gizmo users in many countries.

If you want to use Skype or Gizmo on your next business trip, get the account before you leave so you can avoid delays in service activation. Download and install the clients, set up your account, and then purchase the features you need, such as an inbound phone number and credits for outbound calls.

You should also buy a noise-canceling USB headset—critical for high-quality calls. Bluetooth headsets may offer a greater range, but on the road they require charging and sometimes suffer from interference.

Finally, before you leave, check the cost of your hotel's Internet access. Boingo Wireless (www.boingo.com), which offers a Mac client, covers many hotels in its $22 monthly flat-rate service. Boingo also covers dozens of airports, making en route calls inexpensive, too.—**GLENN FLEISHMAN**

Memory-Card Reader An SD memory card fits neatly into a memory-card reader designed for the MacBook Pro's ExpressCard slot.

Transfer Files Fast with FireWire

Like all newer Macs, my office iMac has a Gigabit Ethernet connector, meaning that it can theoretically transfer data at up to 1,000 Mbps.

But when I bring my MacBook to work, it can't transfer files at those speeds, because my desktop Mac's single Ethernet jack is busy connecting to the office LAN. I can't use AirPort wireless either, because it's too slow (about 54 Mbps in theory, and less in practice) for big files.

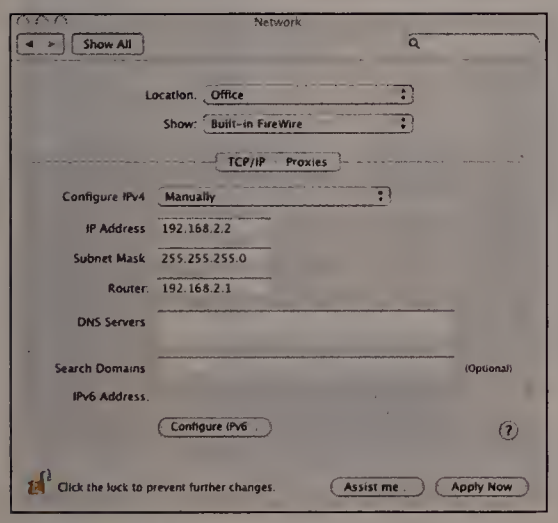
The solution is a FireWire network. It's fast—400 or 800 Mbps in theory (depending on what kind of Mac you have), which is not much slower than Gigabit Ethernet in typical use. And it's handy for creating quick machine-to-machine connections.

To set up a FireWire network, open System Preferences: Network. From the Show pull-down menu, choose Network Port Configurations; then select Built-in FireWire and click on Apply Now. (If Built-in FireWire isn't in the list of port configurations, select New, choose Built-in FireWire from the Port pull-down menu, and click on OK.) Drag the Built-in FireWire configuration up the list so that OS X will try it when other network ports fail to make a connection; put it in the second-highest spot on your network-connected Mac (the port connected to the network should come first) and in the top spot on the other Mac.

After stringing a FireWire cable between the two computers, you're ready to configure the network. On your network-connected Mac (in my case, the iMac), open System Preferences: Network, and choose Built-in FireWire from the Show pull-down menu. From the Configure IPv4 drop-down menu, choose Manually; then type in an IP address that won't conflict with anything else on your network, such as 192.168.2.1. Use the same IP address for Router, set Subnet Mask to 255.255.255.0, and click on Apply Now.

On the other Mac (in my case, the MacBook), go to the same Network preference pane. Choose an IP address with the same number as the one you used on your Net-connected machine, but increase the last digit by one (192.168.2.2, for example). Use 255.255.255.0 for Subnet Mask and 192.168.2.1 for Router, and click on Apply Now.

Next, you need to enable file sharing. On each computer, go to System Preferences: Sharing, click on the Services tab, and enable Personal File Sharing. If you want to share an Internet connection, click on the Internet tab and click on the Start button. From either system, you should now be able to choose Go: Connect To Server, enter the other Mac's IP address (plus the user login), and start sharing files at FireWire speeds.—**DEREK K. MILLER**



FireWire Networking You have to manually configure a FireWire network between two Macs—but it requires only a few simple settings.

Jeff Carlson is the managing editor of TidBits and the author of *iMovie HD 6 and iDVD 6 for Mac OS X: Visual QuickStart Guide* (Peachpit Press, 2006). **Glenn Fleishman** writes for the *Economist*, the *New York Times*, and *Popular Science*. **Derek K. Miller** is a writer, an editor, and a podcaster who blogs at penmachine.com.

No-Stress Remote Access

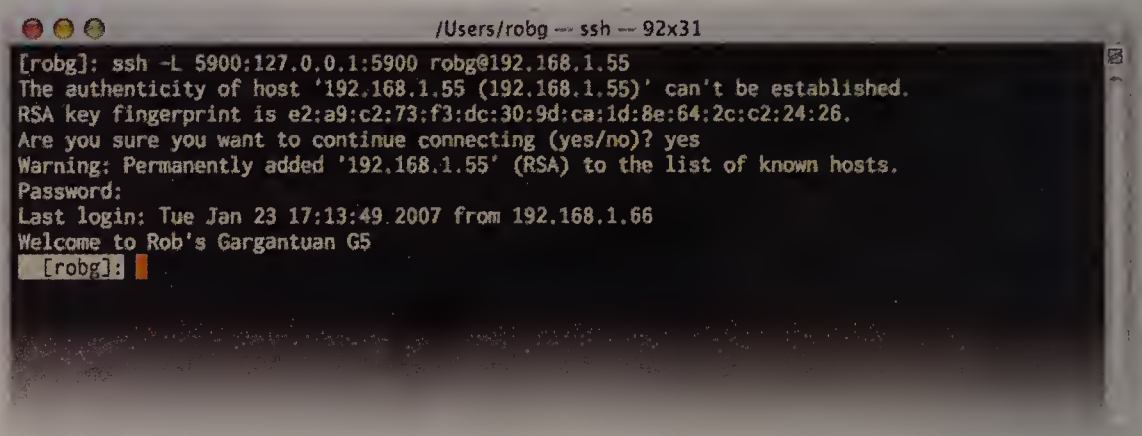
Control a remote Mac over the Net—without worrying about hackers

BY ROB GRIFFITHS

When you're at the office or on the road, it can be handy to have remote access to your home Mac—so you can retrieve a forgotten file, start a large download, or perform some other task. The same applies if you're at home and need access to your work computer. OS X provides a number of ways to connect to a remote machine, including remote login, personal file sharing, and FTP.

But while those are all good tools, they don't let you use that remote Mac's graphical user interface. Fortunately, you can do that, too, using the Apple Remote Desktop server built into every copy of OS X since version 10.4.

We've covered the basics of using Remote Desktop before (see "No Files Left Behind" at macworld.com/1551); this month, we'll show you how to set up a fully secure remote connection, in which all the exchanges between the machines will be encrypted. Anyone who might be "listening in" (if you're at a coffee shop, for instance) won't be able to capture anything other than a stream of useless encrypted characters.



Host Authenticity When you connect to another machine using SSH, you'll see a series of warnings and questions. Don't be concerned; just say yes.

Getting Started

First, obviously, you need two computers—the remote Mac (for the purposes of this article, we'll call it HomeMac) and the Mac you'll be using to access it (we'll call this one OfficeMac). We'll assume that you're using two Macs running OS X 10.4.8 or later (though the instructions should work on OS X versions as old as 10.4, or 10.3 if you've manually installed Remote Desktop).

Second, HomeMac needs to have an always-on Internet connection, preferably a fast one. In this case, upload speed is more important than download speed; to find out what yours is, go to www.speakeasy.net/speedtest. An upload speed of at least 1 Mbps is best.

If HomeMac is connected to the Internet through a router, you may have to configure that router to forward port 22 (used by SSH, which is at the heart of this whole process) and ports 3283 and 5900 (used by Remote Desktop) to the Mac you want to control. (We can't provide instructions for each of the hundreds of different routers on the market today. You can usually find a port-forwarding section in your router's Web-based administration interface; check your documentation.)

Third, you'll need to know the public IP address of HomeMac. (This may not be the same IP address you see in the Network preference pane. If you connect to the Net through a router, that pane will tell you only your local IP address on your home network, not the IP address that's visible to the outside world.) The easiest way to find your public IP address is to visit DynDNS's Current IP Check page (checkip.dyndns.org). Alternatively, you could use a dynamic domain service to give HomeMac its own domain name (see "Remotely Access Your Mac" at macworld.com/2491). However you do it, record the IP address or domain name somewhere on OfficeMac—a Stickies note is a good spot.

Finally, OfficeMac will need a copy of the open-source program Chicken of the VNC, or COTVNC (free; macworld.com/0264), which you'll use to display HomeMac's screen.

Configuring the Machines

Once you have everything you need, it's time to prepare HomeMac for the remote connection.

In HomeMac's Sharing preference pane, select the Remote Login option. This enables the SSH server, which allows for secure (encrypted) command-line access to HomeMac from another machine.

Next, still in the Sharing preference pane, select Apple Remote Desktop. If an Access Privileges screen doesn't open when you do that, click on the Access Privileges button to open it. In the Access Privileges screen, select VNC Viewers May Control Screen With Password. Then enter a password and click on OK; you can ignore everything else in this window.

The final configuration step is optional: set HomeMac's display resolution to 1,024 × 768—remote display of the GUI goes much faster if you use a low resolution.

HomeMac is now ready to be controlled by OfficeMac. Just be sure that HomeMac is on before you leave, or that you've used the Energy Saver preference pane to set daily wake and sleep times. That said, it's a very good idea to test the rest of this tip out *before* you really need it—maybe by setting up HomeMac and then trying to access it from a nearby Internet café—just in case you need to make some adjustments.

Accessing Your Mac Remotely

Once you reach your destination, establish OfficeMac's Internet connection. Now for the magic—open Terminal (/Applications/Utilities) and enter the following command:

```
ssh -L 5900:127.0.0.1:5900 username@1.2.3.4
```

Replace ***username*** with your short user name on HomeMac, and ***1.2.3.4*** with HomeMac's public IP address or domain name.

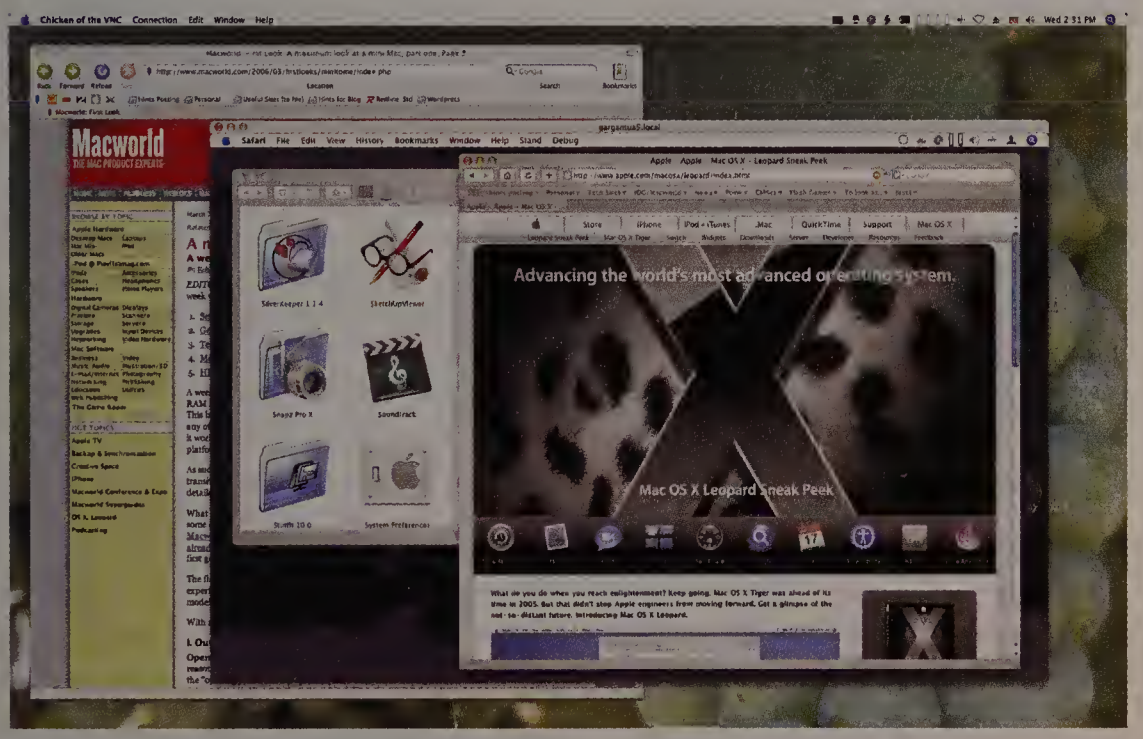
This is what you've just done: The **ssh** command initiates a secure connection to a remote host. The **-L** switch binds port 5900 on the current machine (in network addressing, **127.0.0.1** means "this machine") to port 5900 on that remote host. The last section of the command specifies who that remote host is: your user account on HomeMac. Why port 5900? Because that's the one VNC uses. In other words, the command initiates a secure connection between OfficeMac and HomeMac, forwarding anything happening on port 5900 on OfficeMac to port 5900 on HomeMac.

The first time you connect using SSH in Terminal, you'll see a warning about the authenticity of the host and be asked to confirm that you want to continue (see "Host Authenticity"). Don't worry; this is completely normal. It's just the system's way of telling you that it doesn't know anything about the host you're connecting to. Type **yes** at the prompt, and you shouldn't see that warning again.

Then you should see a password dialog box. Enter the login password for your user account on HomeMac, and press return. That should produce a welcome message from HomeMac.

You've established a secure connection between the two machines. Now it's time to use it. Fire up COTVNC on OfficeMac and choose Connection: New Connection. In the dialog box that appears, enter **localhost** as the host (if that isn't already there), and then enter the password you set in the Access Privileges window on HomeMac. Leave the rest of the settings as they are, and click on Connect.

If everything is set up correctly, you should soon (depending on HomeMac's display resolution and the speed of your connection) see HomeMac's screen displayed in a window on OfficeMac's screen (see "Remote GUI Access").



Remote GUI Access Here's how things look when you connect remotely to another Mac's GUI. In the background is the master Mac. The smaller window belongs to COTVNC, which is running Safari on the remote machine.

Wrapping Up

When you've done what you need to do on HomeMac, quit COTVNC. Switch back to Terminal and type **exit** to terminate the secure connection between HomeMac and OfficeMac.

Now you no longer have to worry about compromising your data when you make a remote connection. Thanks to tools built into OS X and some free VNC software, you can have full GUI control of your remote Mac over a secure encrypted connection. Just keep in mind that whatever you're doing on the remote Mac will be visible on its screen if you've left it turned on.

Senior Editor **Rob Griffiths** runs the MacOSXHints.com Web site.

Forget the Passwords

You can also make a secure GUI connection between two Macs without entering a password. The trick is to use *key-based authentication*. To set this up, you create public and private keys on OfficeMac and then transfer the public key to a special file on HomeMac. Thereafter, whenever you initiate a connection, HomeMac will encrypt a random number using the stored public key and send it to OfficeMac. OfficeMac will then decrypt the number using its private key—the only key that can unscramble the number—and send the decoded number back to HomeMac. HomeMac will compare the two numbers and, if they match, let you connect. For more on how to do all that, see macworld.com/2609.

Help Desk

Mac OS X Hints

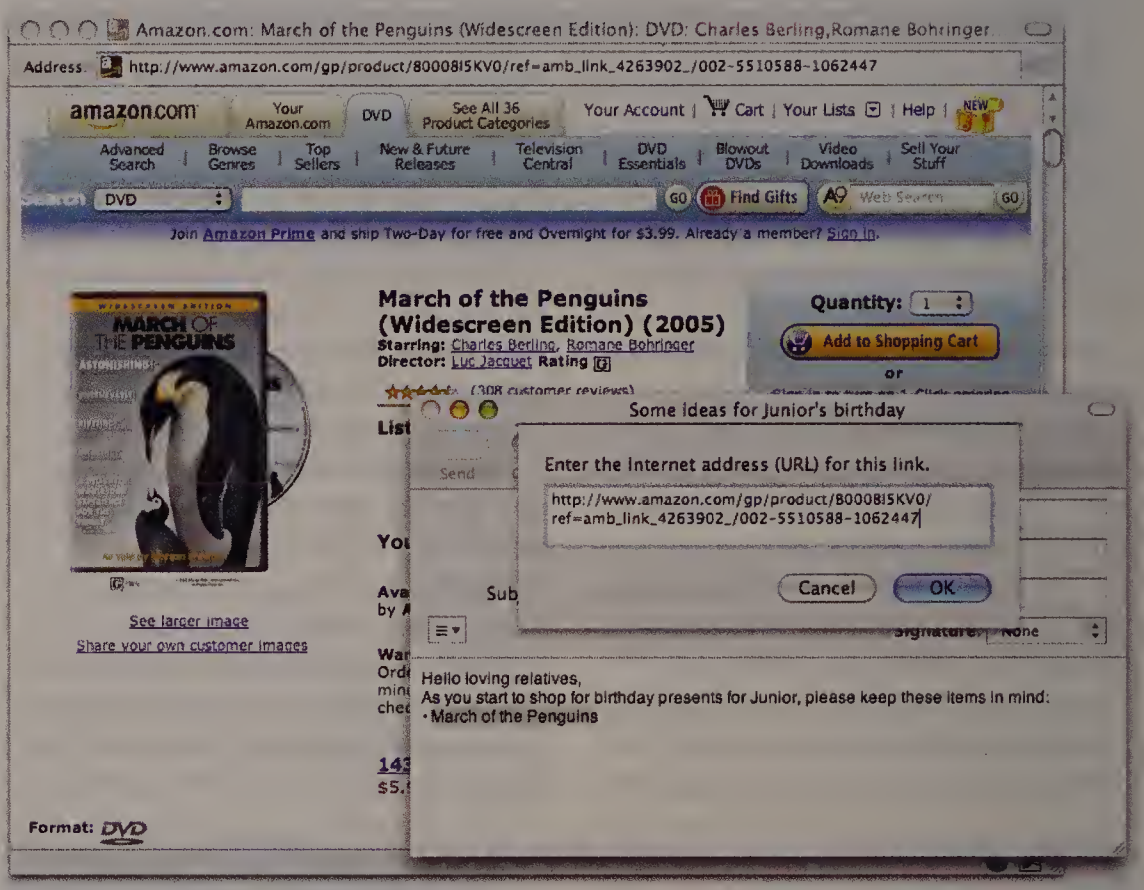
The insider tips you won't get from Apple **BY ROB GRIFFITHS**

Send Long URLs via E-mail

If you sometimes e-mail URLs to friends or colleagues, you may be vexed when recipients write back to say that a link doesn't work. For instance, here's a typical problematic URL: http://www.amazon.com/gp/product/B000BI5KV0/ref=amb_link_4263902_/002-5510588-1062447.

E-mail clients often insert line breaks in long URLs—such as this one for the *March of the Penguins* DVD on Amazon.com—so only part of the address ends up as a clickable link. When your recipients click on it, they'll get a "page not found" message. So how do you avoid this problem? Try these tricks out, and see which one works best with the e-mail clients you and your friends use.

If you use Apple's Mail and send e-mail in Rich Text Format, an easy solution is to use Mail's Edit: Add Hyperlink menu item. First copy the long URL from your browser's address bar (⌘-C). Then open a new e-mail message and make sure that you're using Rich Text Format (Format: Make Rich Text). Start composing your e-mail, and when you reach the spot where you want the link to be, type in a short phrase describing the URL—**`March of the Penguins`**, for instance. Now select that phrase, choose Edit: Add Hyperlink, and then paste the URL (⌘-V) into the text field that appears (see "E-mail Long URLs"). When you click on OK, you'll see that your phrase has been underlined; you've created a clickable link.



E-mail Long URLs If your friends can't click on the URLs you paste into e-mail messages, try creating clickable links in Rich Text Format messages.

If you don't want to send Rich Text Format e-mails, try putting angle brackets at either end of your URL, like this: **`<http://www.amazon.com/gp/product/B000BI5KV0/ref=amb_link_4263902_/002-5510588-1062447>`**.

URLs enclosed in angle brackets *should* remain clickable—even if the recipient's e-mail client inserts a line break for formatting purposes. But with the wide variety of e-mail clients available, there are no guarantees.

If neither of those methods works, visit a Web site that converts long, messy URLs into short ones—TinyURL.com is one good example. Paste your long URL into TinyURL.com's text field, and then click on the Make TinyURL button. The site will produce a short reference URL—for example, http://tinyurl.com/27ghfn—that most e-mail clients won't need to break.

Merge Two iCal Calendars

Have you ever set up two iCal calendars and then wished you'd created only

Have a hint to share?

Go to MacOSXHints.com to submit it. This column was based on tips from Brendan J. Walsh and anonymous contributors. Each month, the author of our favorite tip receives the *Help Desk* mug.

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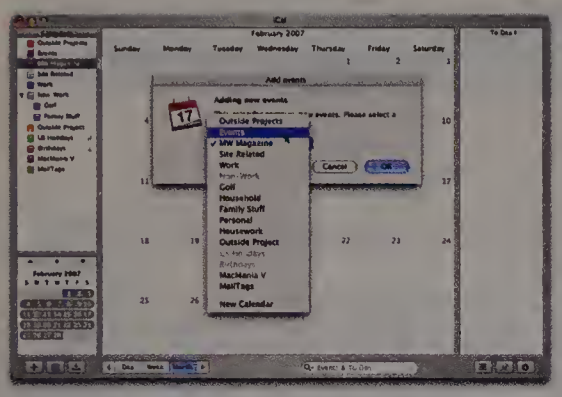


Merge Two Calendars Combining two iCal calendars into one is simple, once you know the secret. Just export one calendar and then import its events into the other.

one? For example, I used to have one calendar named Personal and another named Family Stuff—I eventually decided that they were redundant, but how to merge them wasn't clear.

Luckily, you don't have to manually move all the events from one calendar to another. Instead, turn to iCal's Export command. In the Calendars column, select the calendar whose events you want to move to another calendar. Go to File: Export. When the dialog box appears, choose a name and a location for the exported file. (The desktop is probably a fine place to store it; you won't have this file for very long.) Click on Export.

Now choose File: Import. In the Import dialog box, leave the Import An iCal File option selected and click on Import. Navigate to the file; then click on Import again. The Add Events dialog box will appear. The pop-up menu in its middle lets you specify the destination calendar for the imported events (see "Merge Two Calendars"). Choose the one you want, and then click on OK to add the events to it.

POWER TIP OF THE MONTH

Put Your Mac to Sleep from Afar

Apple's Mail program lets you use rules (Mail: Preferences: Rules) to manage your incoming e-mail. But you might not be aware of another aspect of Mail's rules—the ability to run an AppleScript on a filtered message. With just a little bit of planning, for example, you can send yourself an e-mail that will put a remote Mac to sleep.

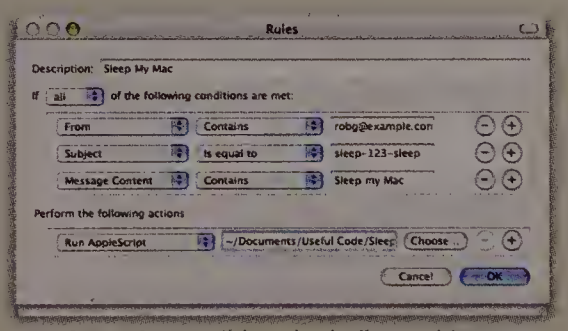
This very simple script asks you to confirm that you really want to put the computer to sleep and then does so, unless you click on Cancel. Launch Script Editor (in /Applications/AppleScript) and type this script (or download it from macworld.com/2545):

```
tell application "Finder"
display dialog "This Computer will go to sleep in 1 minute." buttons {"Sleep", "Cancel"} default button 2 giving up after 60
sleep
end tell
```

Choose File: Save to bring up the Save dialog box. Name your script and save it somewhere you can find it later. Leave the other settings in this dialog box as they are.

Now open Mail's Preferences (Mail: Preferences) and click on Rules in the toolbar. Click on Add Rule. In the window that appears, give your rule a name and then create a set of conditions to ensure that the rule will act on only the right e-mails. (To see how I set up my rule, see "Set the Rules.")

Once you've set your conditions, set the Perform The Following Actions pop-up menu to Run AppleScript, and then click on the Choose button and navigate to your script. Click on OK, and you're done. The next time you forget to put your Mac to sleep before leaving on a trip, just send yourself an e-mail that matches the conditions you created.



Set the Rules Build a rule similar to this one to determine what type of e-mail can trigger the the AppleScript that puts your Mac to sleep.

WHAT'S ONLINE

Shut Down Your Remote Mac Learn how to safely shut down a remote Mac, using the Unix command fittingly named **shutdown** (macworld.com/2548).

Customize Your Trash Icon Tired of the Dock's boring "empty" and "full" Trash icons? Learn how to replace them (macworld.com/2549).

Simplify Spoken Alerts Here's how to make the spoken-alert feature speak just the alert and nothing else (macworld.com/2550).

Quickly Hide Mail's Preview Pane

I almost never open an e-mail message in its own window. Instead, I usually read messages in Mail's preview pane—the area below the message list. (Don't see it? Double-click on the little dot at the bottom of the Mail window.) The problem is that when you use your Mac in an open office environment, there may be times when you want to quickly hide the contents of the message you're reading. Perhaps it's a note about an upcoming surprise party, and the subject of said party is walking toward your cubicle.

There are many ways to handle this situation. You can press ⌘-H to hide Mail, press ⌘-tab to switch to a different open application, or just press ⌘-Q to quit Mail altogether. But there's also a way to stay in Mail while quickly hiding only the message: in the message list, ⌘-click on the message that's currently displayed in the preview area. ⌘-clicking on an already selected item deselects it. In Mail, this means that the preview area will become blank.

You can also hide the entire preview pane, by double-clicking on the bar that divides it from the message list. However, the ⌘-click method makes it easier to return to preview mode when you're done being secretive—just click on any message to reveal it again.

Decode Mail's Folder Colors

If you use Mail and organize your messages into folders, you might notice that some folders are white and some are blue. For instance, messages imported

OS X 101

Get a Handle on Fonts

Whether you're trying to disable a typeface you never use or add a new one to your system, you may be somewhat confused about how Mac OS X handles fonts. This month, I'll explain how OS X organizes its fonts, and give you some tips for working with them.

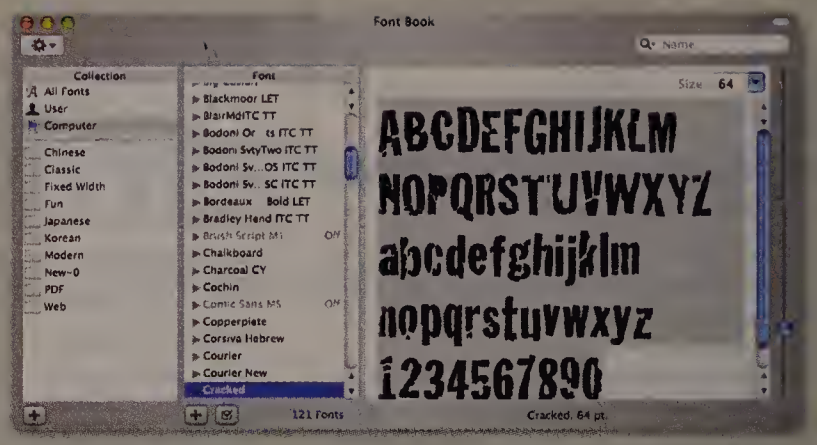
Where the Fonts Are When you're trying to wrangle a collection of fonts, one of the first things that can trip you up is the fact that OS X stores them in many different places.

System fonts—the ones that OS X uses in dialog boxes, menu bars, and elsewhere—live in the /System/Library/Fonts folder. In general, you don't want to touch anything in here, or you may find, for instance, that Safari won't correctly render the text on a Web page.

All of a Mac's users can access fonts stored in the /Library/Fonts folder. But only administrative users (those listed as Admin in the Accounts preference pane) can add fonts to, and remove them from, this folder. Each of a Mac's users also has his or her own Fonts folder (*your user folder*/Library/Fonts). It holds fonts available only to that user.

If you're using Classic and you want a new font to be accessible in both OS X and Classic, you should store it in Classic's System Folder/Fonts folder. OS X can see fonts here, but Classic can't see fonts stored anywhere else.

Solving Problems with Font Book Since OS X 10.3 (Panther), all Macs have included a basic font-management tool, Font Book (/Applications). Font Book lets you see a list of all your fonts in one window. You can preview, or get detailed information about, any font (see "Control Fonts"). Some, such as Bookman Old Style and Arial, even come with interesting descriptions of their backgrounds.



Control Fonts Font Book lets you see what a font looks like, learn more about it, turn fonts off and on, and do some troubleshooting.

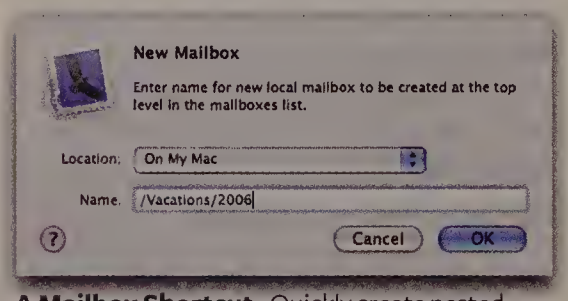
You can also use Font Book to *deactivate* fonts—in other words, to turn them off without removing them from your system. (To be honest, though, Font Book isn't the best application for doing this. You need a full-featured font utility.)

Font Book is most useful for dealing with common font problems. For instance, when you install applications, sometimes they place newer versions of system fonts in your user folder's Fonts folder. This can result in duplicate fonts, which might cause problems in some applications. To resolve this, click in the Font column, press ⌘-A to select all, and then choose Edit: Resolve Duplicates.

Also use Font Book to check for font corruption, which can cause application crashes and other unexpected behavior. Select all the fonts in the Fonts column again; then choose File: Validate Fonts. Font Book will indicate problematic fonts in the Font Validation window. To remove a font, select the check box next to its name and then click on Remove Checked.

into Mail wind up stored in a white folder named Imported. But when you create folders on your own, they're usually blue. There is a method to the madness.

A white folder can contain only other folders, not individual messages. Blue folders, on the other hand, have no such restrictions. So why does a folder end up white or blue? White folders are just folders, while blue folders are mailbox folders. You can see this for yourself in the Finder. Navigate to *your user folder*/Library/Mail/Mailboxes. Inside this folder is an entry for each top-level folder you have in Mail. White folders will lack the *.mbox* extension, which indicates that they aren't mailboxes. As such, these folders can't be used to store individual messages, but they can store mailboxes.



A Mailbox Shortcut Quickly create nested mailboxes in Mail by typing their names, separated by a slash, into the New Mailbox dialog box. Here, I'm creating a folder named Vacations that contains a folder named 2006.

White folders are useful because they can prevent you from misfiling a message during a drag-and-drop operation—you can't accidentally drop the message on the top-level folder, because it won't accept the incoming message. Alternatively, you might want to use white to call out a folder or two, since Mail won't let you assign colors to folders.

The easiest way to create a white mailbox folder is to make two folders at once. Select Mailbox: New Mailbox. In the dialog box that appears, type two names separated by a forward slash (/). The slash indicates a path hierarchy. For example, say you want to create a new, white Vacations folder, and within that, a subfolder named 2006. Open the New Mailbox dialog box and then type **`/Vacations/2006`** into the Name field. The leading slash tells Mail that the Vacations folder needs to be at the top level of your hierarchy (otherwise it will go within the currently selected folder). The second slash tells Mail to create the 2006 mailbox within the Vacations folder (see "A Mailbox Shortcut"). Click on OK, and the folders will appear.

Senior Editor **Rob Griffiths** runs the MacOSXHints.com Web site.

ICON BY PAUL HOWALT

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Mac 911

Solutions to your most vexing Mac problems **BY CHRISTOPHER BREEN**

From VHS to DVD

Q: I have a lot of old home videos I want to transfer to DVD. What software or hardware do I need, and how do I get the process up and running?

Jerry Nichols

A: Usually, the first step in burning your videos to DVD is to transfer them to your Mac. There are a few ways to do that. If you have a MiniDV camcorder, it likely has a pass-through mode, in which the camera will take care of the conversion for you. Plug your VCR's outputs into the camcorder's inputs, string a FireWire cable between the camcorder and your Mac, enable the camera's pass-through mode, and capture your movie in Apple's iMovie. Note that your results may be less than perfect—some cameras perform better than others (and some, I'm told, don't work at all).

Alternatively, you can purchase an analog-to-DV converter box such as Datavideo's $185 DAC-200 (www.datavideo.us) or Canopus's $229 ADVC55 (4½; macworld.com/2523). Plug the VCR's outputs into the analog input jacks on one of these boxes, string a FireWire cable between it and your Mac, and then capture your video in iMovie.

And if you have a Mac that supports USB 2.0, you can use an EyeTV-compatible video-capture device such as Elgato's $200 EyeTV 250 (4½; macworld.com/2411), which has an MPEG-2 hardware encoder. If you need to make only minimal edits—simple cuts to lop out extraneous material, for example—the included EyeTV 2 software will do the job, but it doesn't let you add transitions or effects.

Once you've captured the video (by any of these methods) and opened it in iMovie, you can edit it and then export it to Apple's iDVD to burn it to disc.

If you're simply looking for a way to archive your video on a more durable medium and don't want to bother with all those steps, you can skip your computer altogether. A number of manufacturers, including Panasonic, Toshiba, and Philips, sell VHS-DVD decks for under $200—your local electronics store is sure to have at least one of these units on the shelves (Amazon.com is another good source). These decks can dub tapes to writable DVDs (and vice versa)—and as a bonus, they operate like traditional VCRs.

Later, if you decide you want to edit the video you've burned to DVD, you can always extract it from the disc with a tool such as the free HandBrake (macworld.com/2468). Then pull it into iMovie and edit to your heart's content.

Have a problem?
Go to the Mac 911 forum (macworld.com/2467) for help with your misbehaving Mac or applications.

Create the Endless DVD

Q: How can I burn a QuickTime movie in iDVD that loops but doesn't have a menu?

Jane Williams

A: I assume that you need this setup for use in a kiosk. No sweat. Launch iDVD (/Applications) and open a new project (File: New). Click on the DVD Map button (the one just to the right of the Play button at the bottom of the window). At the top of the resulting pane is a box that reads, "Drag content here to automatically play when the disc is inserted." Do as it suggests: drag your QuickTime movie into this box. Then click on the box to select it, and choose Advanced: Loop Movie.

Save your project and burn it. When you shove the disc into your DVD player and press play (or insert the disc into your Mac's media drive, which is configured by default to automatically play DVDs), the movie you dragged into the automatic-play area will play, and play, and play.

PHOTOGRAPH BY PETER BELANGER; ICON BY PAUL HOWALT; TIVO IMAGE COPYRIGHT © 2007 BY TIVO INC. ALL RIGHTS RESERVED

Too Much of a Good Thing?

Q: Does having too many applications slow down a Mac? System Profiler lists 375 on my G5 iMac. I could remove tons of them with Austin Sarner's and Brian Ball's AppZapper (appzapper.com), but would that speed up my system?

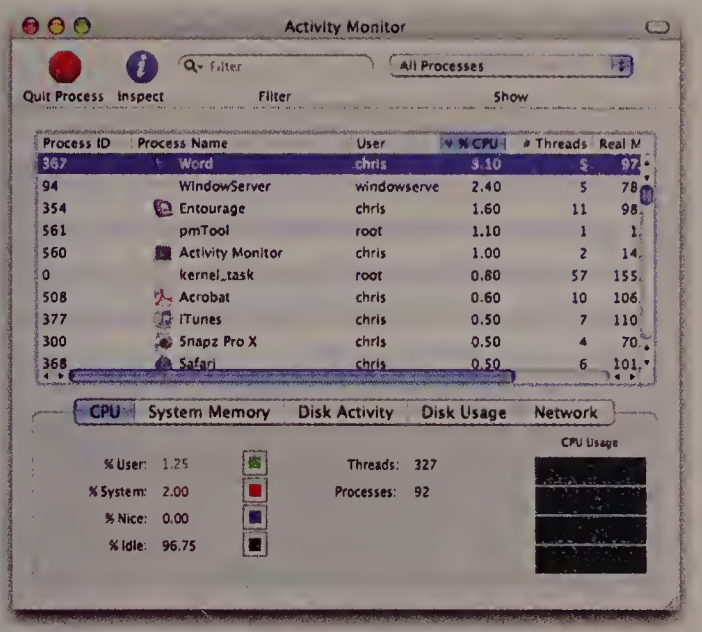
Stephen Good

A: It depends on a few factors: how much hard-drive space those applications consume, the amount of processing power their components use, and the resources your open programs are sucking when they're supposed to be doing nothing.

If your Mac is so crammed with applications (and other kinds of data) that you have very little room left on the hard drive, system performance will suffer. OS X uses free hard-drive space for its virtual memory scheme. At the very least, I try to leave 10 percent of my startup-drive space free so the OS has room for those virtual memory chores (see "Reclaim Your Hard Drive" at macworld.com/2629).

When an application runs a background job that's placing demands on your Mac's processor, the mere presence of that program could slow down performance. In Activity Monitor (/Applications/Utilities), see which background processes appear at the top of the list when you sort by % CPU. If you can do without any of the top ones, getting rid of those programs may improve performance.

If an application requires a login item—if you have a backup program that requires a scheduling component to monitor your Mac behind the scenes, for example—your Mac may take longer to boot up. Again, getting rid of a program you don't need (and its accompanying login item) may bring you to the desktop a little bit faster when you first start up your Mac.



Stop Processor Hogs Does your Mac seem slow? Use Activity Monitor to find out whether open applications, such as Microsoft Word, are gobbling up resources.

And don't forget that open applications can suck on the CPU as well. For instance, I often have Microsoft Word open while I'm working with another application. Word's doing absolutely nothing, as far as I can tell, yet Activity Monitor tells me that it's using between 3 and 4 percent of the CPU (see "Stop Processor Hogs"). I've found that if I leave a browser open for days on end, this has an impact on performance as well.

So try quitting applications when you're really and truly done with them. If you find that one of your programs is sucking more of your computer's oomph than you care for, look for a less processor-hungry alternative.

Finally, have you looked at your Dashboard widgets lately? Third-party widgets can distract your processor, too. See what they're doing in Activity Monitor. Clear out any processor hogs that you installed out of curiosity but never use.

TOOLS OF THE TRADE

TiVo Transfers

I adore the miraculous digital video recorder TiVo, but I've also been frustrated by the difficulty of moving programs from my Series 2 TiVo boxes to my Mac and iPod. Thankfully, the following tools have made the process a lot easier. (Regrettably, none of them works with Series 1 or Series 3 TiVos.)

Toast 8 Titanium TiVo's long-promised Mac version of the TiVo2Go application is available only as a part of Roxio's $100 Toast 8 Titanium (www.roxio.com) and has been renamed TiVo Transfer. It works as advertised, easily finding your Series 2 TiVo recordings via Bonjour networking and downloading them to your Mac.

There, you can view them with Roxio's Video Player. You can also bring these recordings into Toast to burn them to disc or export them to your iPod. The only hitch is that you can't edit these protected videos to cut out commercials or any extra material at a program's beginning or end. To do that, you need an additional tool.

TiVo Decoder Nik Friedman TeBockhorst's free TiVo Decoder (macworld.com/2525) strips out the protection imposed by TiVo Transfer. Drag a program onto the TiVo Decoder AppleScript icon, and it's converted into an MPEG-2 file. In my experience, these files won't play or export properly with QuickTime Player. But they will play perfectly with VideoLAN's free VLC Media Player (www.videolan.org/vlc).

Once you've used TiVo Decoder, bring the converted files back into TiVo Transfer by moving them to the TiVo Recordings folder in *your user folder*/Documents. Select one of these files within the TiVo Recordings area of the TiVo Transfer window, and click on the Toast It button. The TV program will appear in the DVD-Video area of Toast Titanium 8. In Toast, select it and click on Export. You can now export the recording in a format compatible with the iPod, as well as in a variety of other video formats. Then you can edit out the ads in QuickTime Pro Player or iMovie.

TiVoDecode Manager If that sounds like too much trouble, try David Benesch's free TiVoDecode Manager (macworld.com/2607). It can display and transfer recordings from networked Series 2 TiVos via Bonjour, and convert those recordings into MPEG-2 or MPEG-4 video files. You can edit that format in QuickTime Player Pro or iMovie.

Shift Audio Pitch and Speed

Q: I am a dance teacher and need some recommendations for Mac-compatible music-editing programs. The software must be extremely user-friendly (I'm a non-geek) and allow me to slow down the tempo of a track without changing its pitch. I also need to edit a track's

length and insert vocal narration between tracks. Any suggestions would be welcome—the simpler, the better!

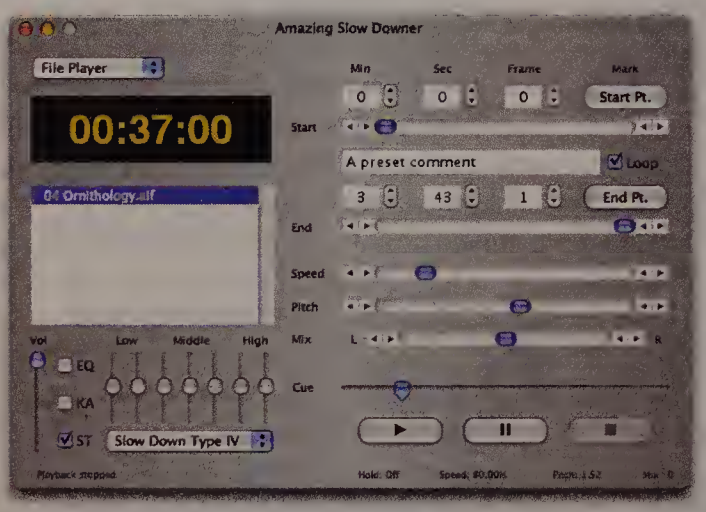
Lorelei Coutts Luxton

A: If you want the best sound quality in an easy-to-use package, I suggest Roni Music's Amazing Slow Downer ($45; www.ronimusic.com). This Universal app's name nicely describes what it does. Feed the program an audio CD or an audio file, and then adjust the pitch or speed (see "Change Tempo, Not Pitch").

When you adjust only the Speed slider, the track's tempo changes without the pitch changing. Likewise, you can adjust only the Pitch slider to change the pitch without changing the tempo. You can also adjust both, set the start and stop points of your track, and even loop your track.

Once you've modified the music to your liking, save the track and export it as an AIFF, MP3, QuickTime, or AAC file. You can import tracks into Apple's GarageBand (which you likely have in your Applications folder); there, you can array them in a sequence and record narration between them.

You might also try HairerSoft's $40 Amadeus Pro (www.hairersoft.com). This is a full-featured audio-editing application that includes a Change Pitch And Speed command in its Effects menu. This command's results aren't as polished as those of Amazing Slow Downer—audio artifacts are far more apparent. But you can do everything you want to within Amadeus Pro without changing over to GarageBand. The application can change the pitch and speed of your tracks, as well as sequence them and add narration between them.



Change Tempo, Not Pitch Amazing Slow Downer can change the tempo of a music track without making it sound as though the Chipmunks had produced it.

Toss Out Unnecessary Languages

Q: I understand that I can recover hard-disk space by removing foreign languages from OS X. The problem is that I need foreign-language support in *some* applications but not others. Is there a way to selectively remove language support from applications?

Lane Weiss

A: There is, but if you have a lot of applications, you'll find the process tedious. Select an application and press ⌘-I to bring up the Info window. Click on the triangle next to the Languages entry to reveal a list of languages that the application supports (some applications support only one). Hold down the ⌘ key and select the languages you don't want. Then click on the Remove button. You'll be warned that the program may not function properly if you proceed—so it's a good idea to have a backup, just in case something goes awry.

When you click on OK in the warning dialog box to proceed, the associated .lproj language folders will be moved to the Trash. To permanently slim your application, empty the Trash.

Senior Editor **Christopher Breen** is the author of *The iPod and iTunes Pocket Guide*, second edition (Peachpit Press, 2007).

Bugs & Fixes

BY TED LANDAU

Target Disk Mode Freeze If you have a 15-inch MacBook Pro or iMac from early 2006, you may find that it freezes in Target Disk Mode. Disconnect the target Mac and restart it to get everything working. To prevent the problem, install the latest firmware update for your Mac (macworld.com/2526).

Streaming Music Drop-offs Has your local AirPort Express network become unusually slow? Does AirTunes' streaming music periodically stop and start? If so, open the Network preference pane, select AirPort from the Show pop-up menu, and click on the TCP/IP tab. From here, click on the Configure IPv6 button at the bottom of the window. Select Off from the Configure IPv6 pop-up menu. Don't worry, most users don't need this option. Of course, if you are one of the few who do, this workaround won't work. You'll just have to wait for Apple to squash the bug.

Pro Application Crashes Several of Apple's pro applications, including Aperture 1.5 (●●●½; macworld.com/2306) and Logic Pro 7.01 (●●●●½; macworld.com/0703), may "unexpectedly quit" as soon as you launch them. If so, you probably installed either Pro Application Support 3.0 or 3.1, or both, before you updated to Tiger (OS X 10.4). The fix is to delete two items: a file called ProRuntime.pkg, in /Library/Receipts/, and a file called PrivateFrameworks/ProKit.framework, in /System/Library/PrivateFrameworks/. Then reinstall Pro Application Support 3.1 for Tiger (macworld.com/2527).

Photoshop Files Don't Open Have you found that when you double-click on an Adobe Photoshop file (made in the CS or CS2 version), the application launches but the file doesn't open? If so, try opening the file via the Open command in Photoshop's File menu. To fix the problem, search your Previous Systems folder for a file called Adobe Unit Types. If you find it, copy it to the active /Library/ScriptingAdditions folder. If you don't find the file, create a new folder called ScriptingAdditions in the /Library folder and then remove and reinstall Photoshop.

Senior Contributor **Ted Landau** is the founder of MacFixIt (www.macfixit.com), a Web site devoted to reporting Mac problems and solutions. Got an issue to report? E-mail bugs@macworld.com or post it in Macworld.com's Mac 911 forum.

ICONS BY PAUL HOWALT

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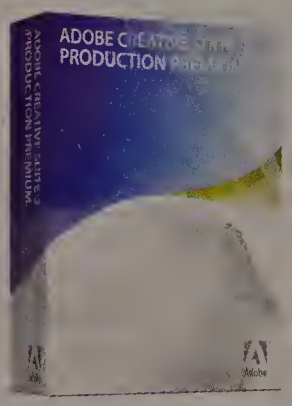

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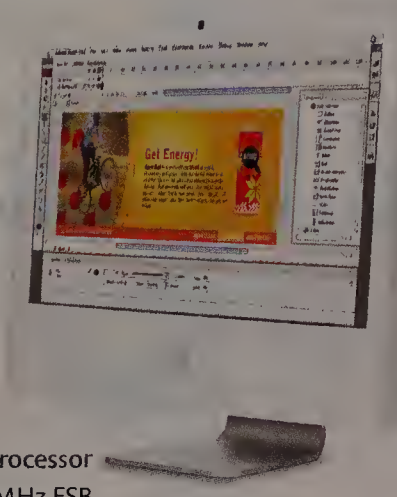

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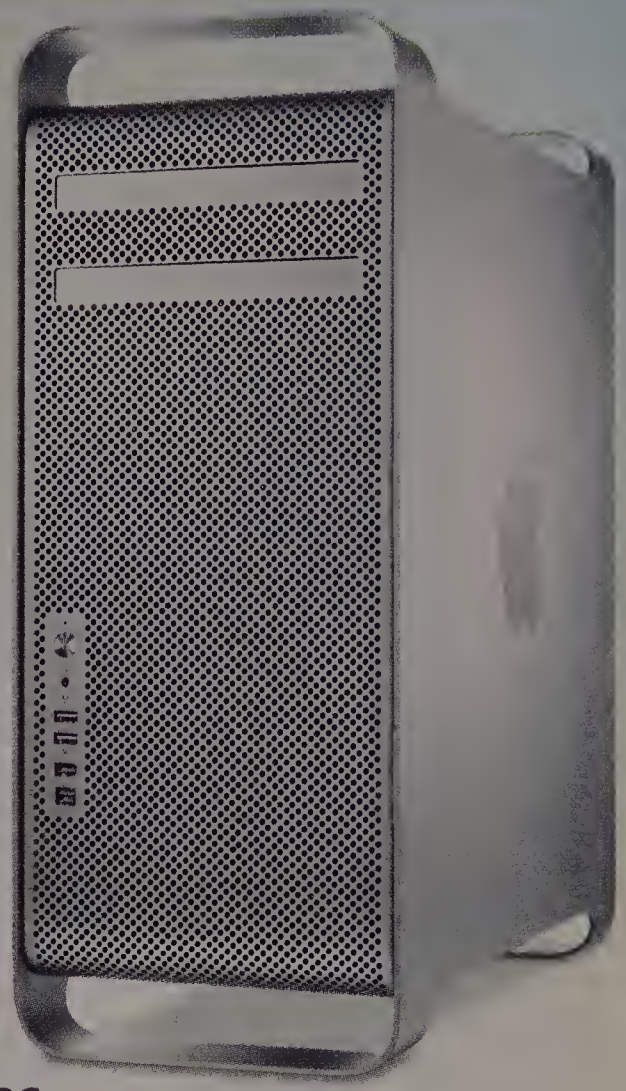

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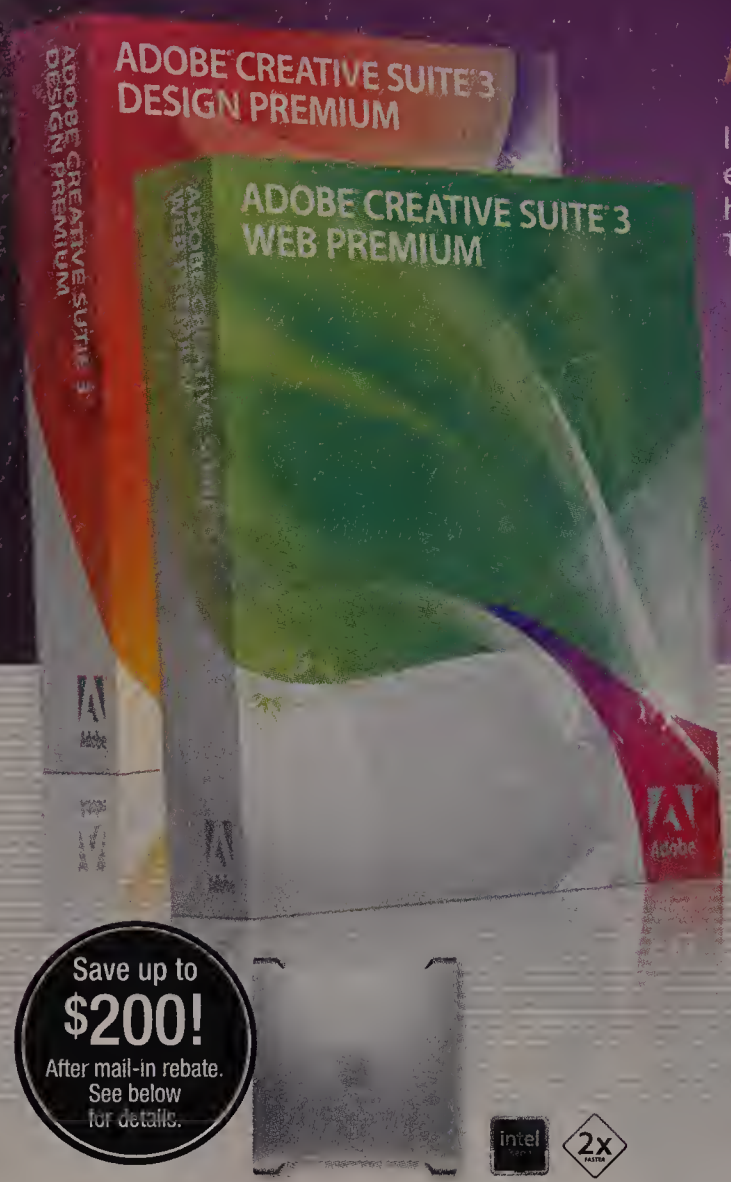

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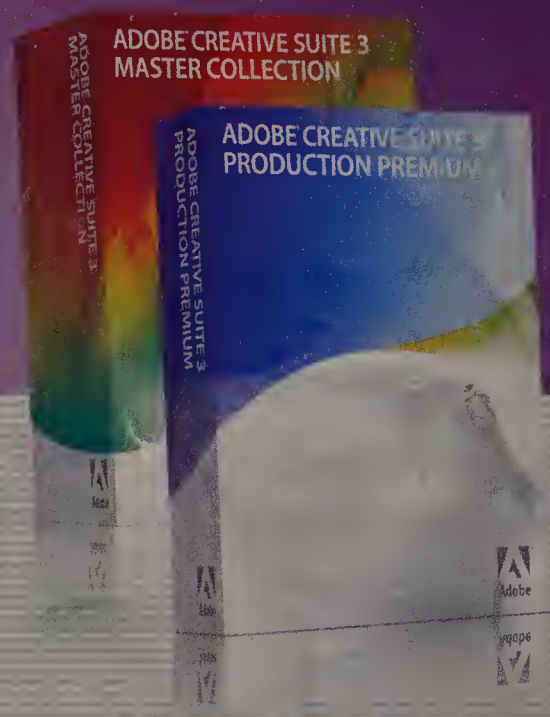

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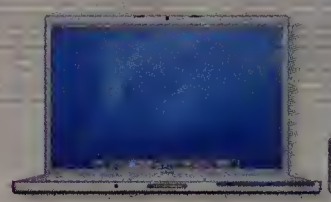

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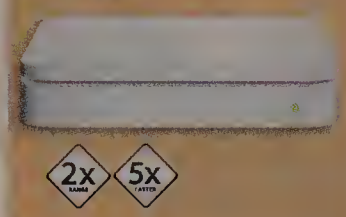

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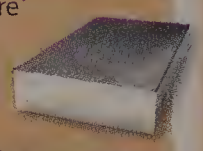

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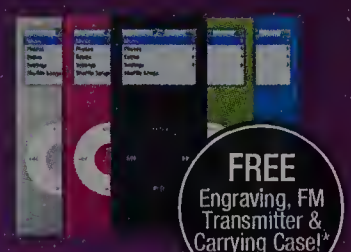

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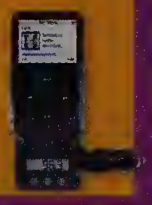

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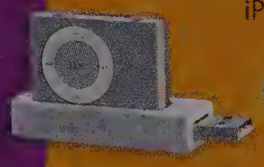

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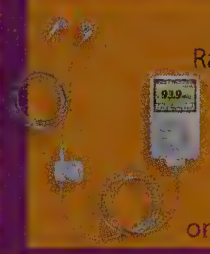

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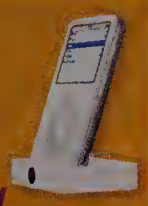

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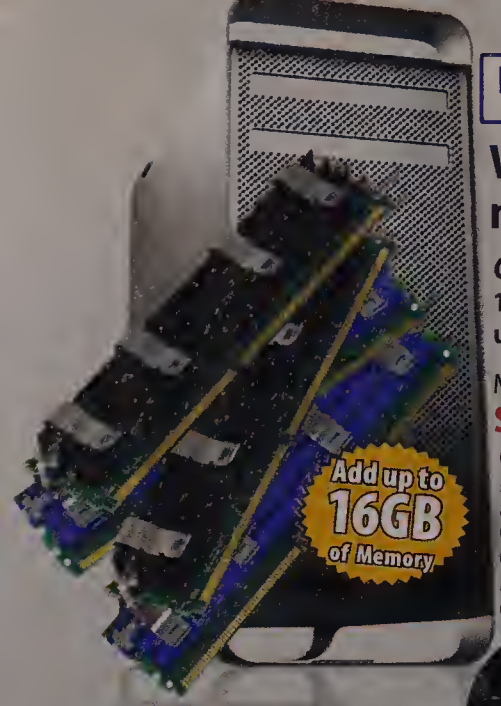

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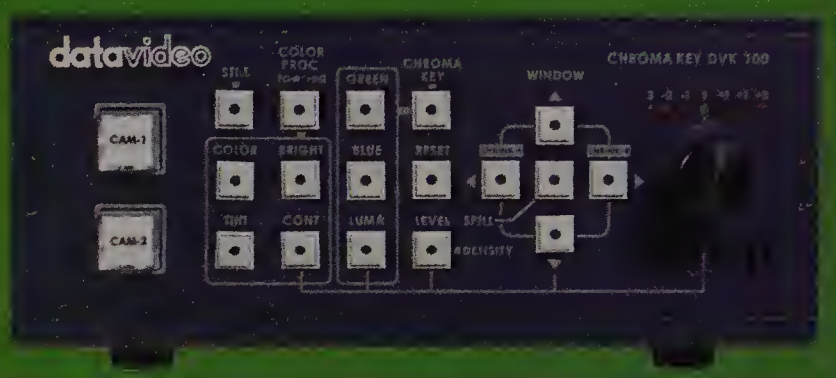

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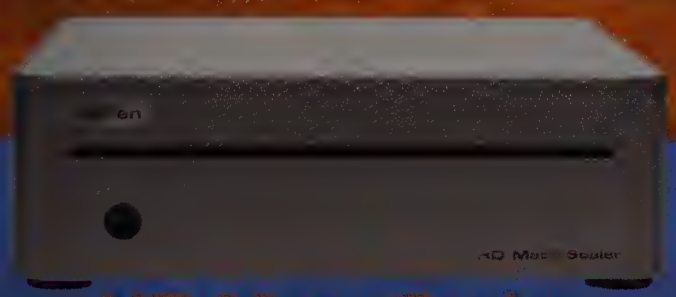

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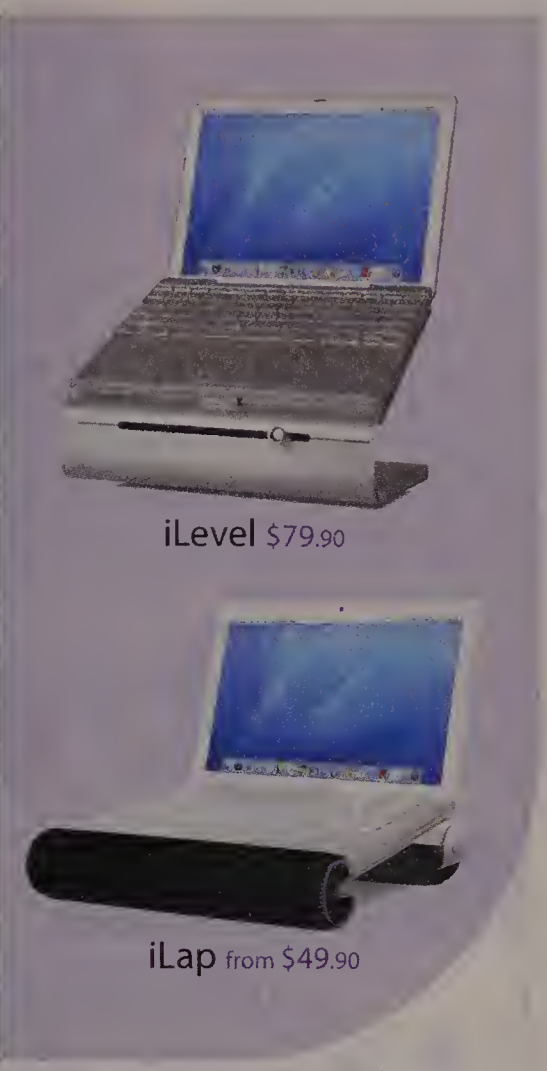

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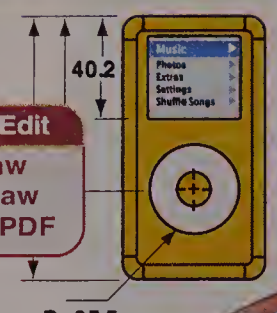

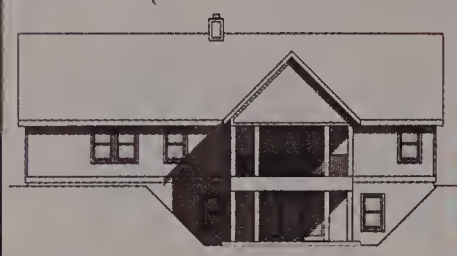

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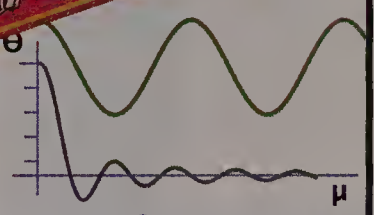

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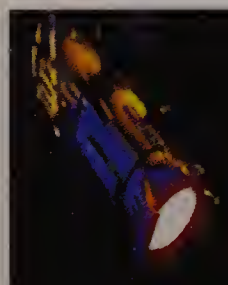

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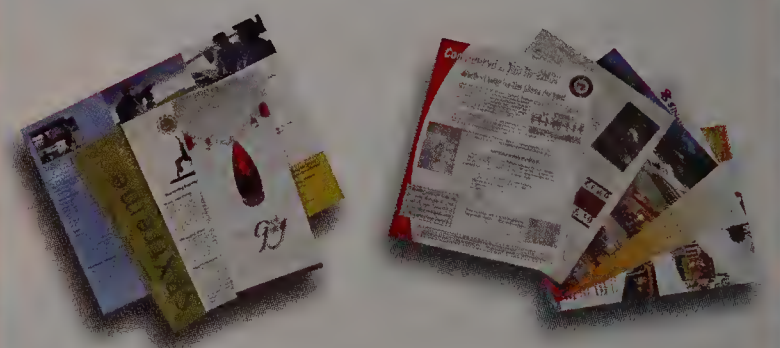

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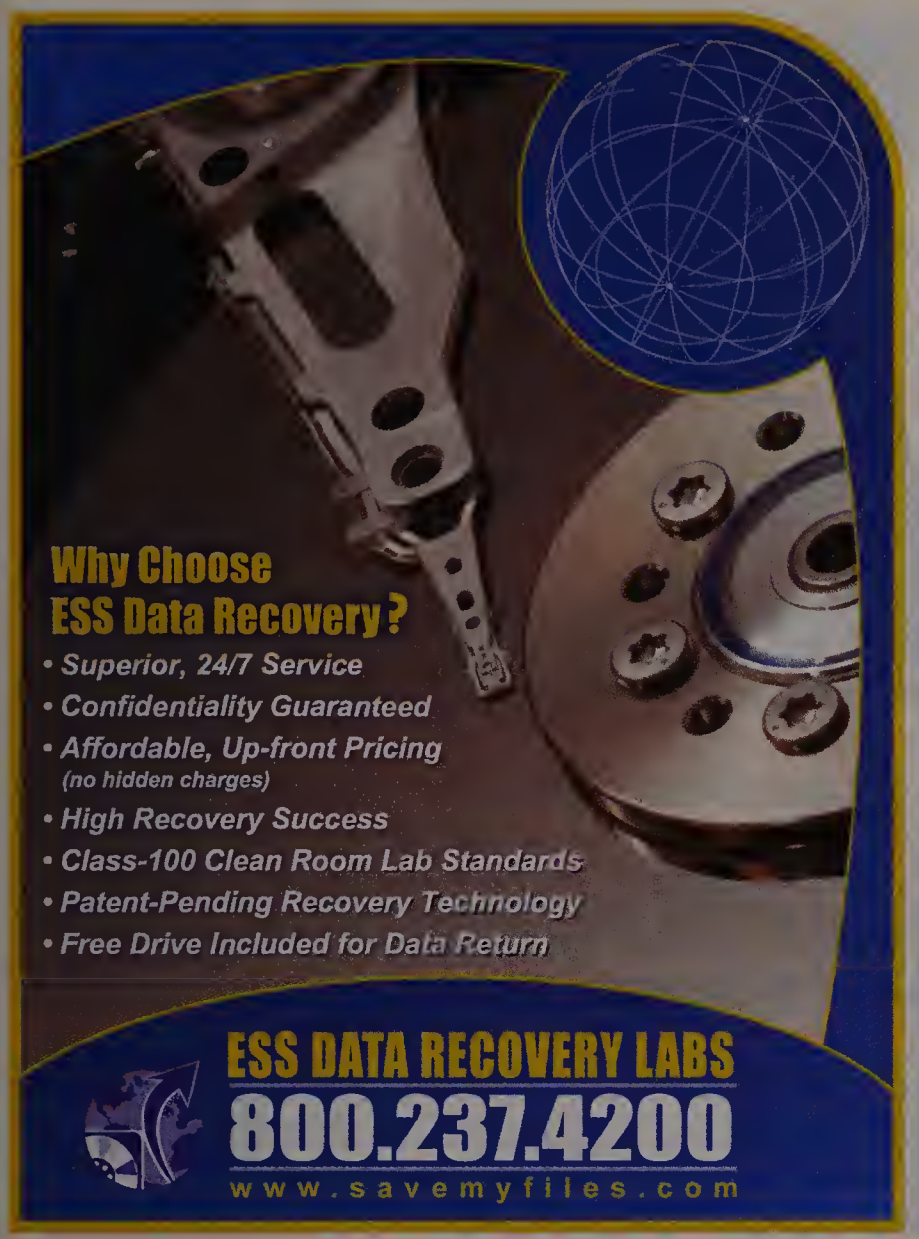
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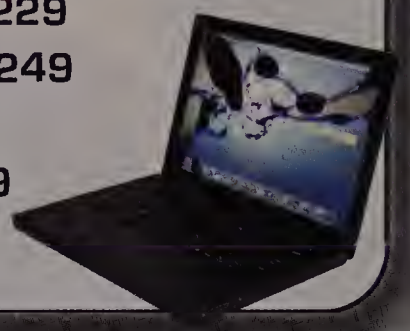

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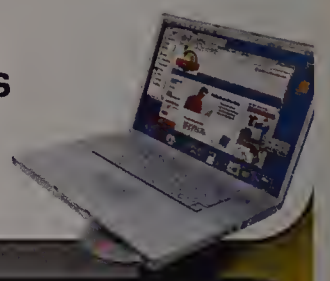

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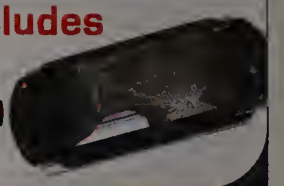

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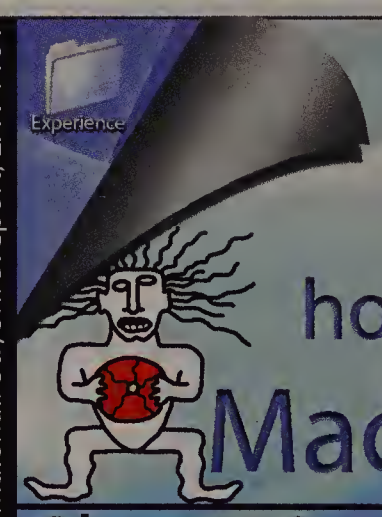

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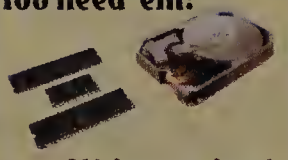

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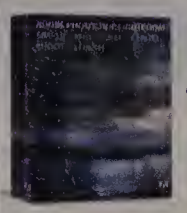

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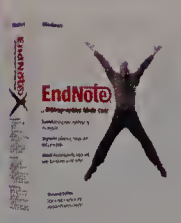

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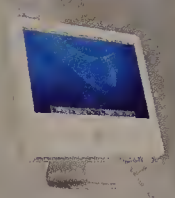

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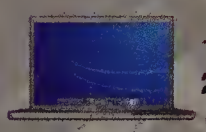

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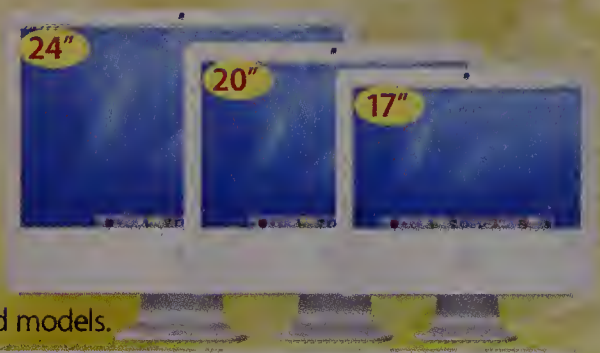

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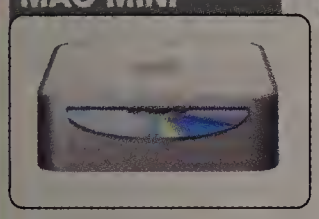
MAC MINI



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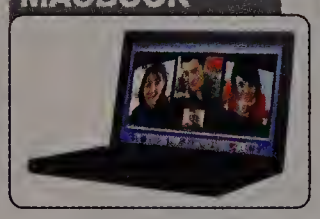
MACBOOK



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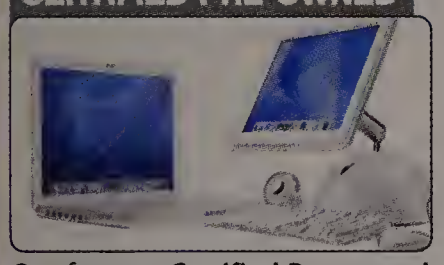

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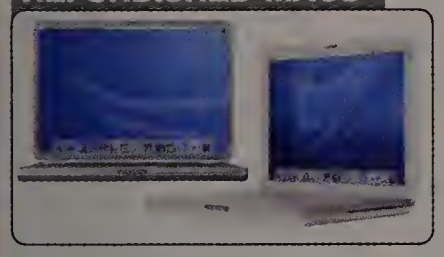

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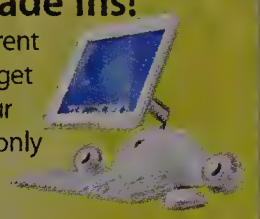

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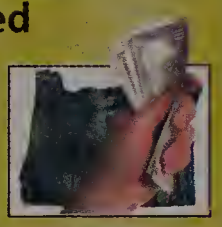

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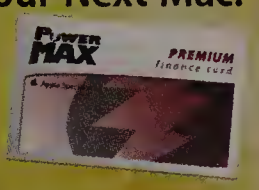

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By Any Other Name

Please, Apple Inc.—don't forget about the computer

"I want you to call me Dar," my good friend Jeff told me once again, impatiently. "Short for Darbloor. It shouldn't be this hard for you to remember it."

It was my sophomore year of college, and a few days earlier, Jeff had suddenly insisted that I stop referring to him by the name that his parents and I had always known him by. My reaction to all this was a precise indicator of my level of maturity and compassion at age 20. If he'd gotten to me two years sooner, he would have been praying for me to forget his request to call him Darbloor. But I'd grown up some, and my sole concern was understanding what had brought the poor lad to such a state.

"Jeff is who I used to be," Darbloor explained, in the manner of a man who'd practiced this speech in front of a mirror. "By choosing the name that best suits the Jeff (sorry, 'Dar') of today, I'm taking a symbolic step that puts me in control of my future and. . . ."

After listening to him continue for ten minutes, I asked him if Darbloor wasn't also the name of one of the villains in the ongoing *Star Wars* comic that we were reading. Then he changed the subject, and I was a good enough friend to pretend not to notice.

Call Me Apple

Now my good friend Apple Computer Inc. has asked me to start calling it Apple Inc. And this time the news came in the form of a press release, rather than over a shared plate of cheesy fries.

Both my friends' motivations are exactly the same, though. Whether you're an individual or a billion-dollar company, you should probably stop every now and then and ask yourself, "Who am I?" But if the answer you wind up with involves a corporate rebranding, you probably ought to go back inside the sweat lodge for another hour.

I still don't know what Jeff's deal was. (The name Dar lasted about as long as the purple hair he sported late in his freshman year.) But with Apple, it's pretty obvious: the company is not just in the computer business anymore. Even if it were, the word *computer* is sounding more and more like a disposable antique of the 1970s or 1980s with each passing year. Here around my sofa, I've got an iPod, a Windows Mobile smart phone, and a TiVo. Each one truly fits the Apple II–era definition of a computer, yet we all know them simply as a music player, a phone, and an enchanted friend that brings us movies and TV shows.

More to the point, each one of these items is in the category of a device that Apple now builds. By the start of summer, the iPhone and the Apple TV will be in hundreds of thousands of homes, thus bringing the reliable Apple stamp of simplicity, reliability, and keen-as-a-lightsaber technology to consumer electronics.

It's pretty obvious Apple is not just in the computer business anymore.

Swell. But will Apple continue to bring that stamp to its computers?

We have MacBooks. But they're unique only in that they run Mac OS instead of Windows. Where is that new miraculous subnotebook or tablet that only Apple can design?

Thanks to the transition to Intel, iMacs and Mac Pros are absolutely no-foolin' among the most powerful desktops on the planet. But has desktop evolution truly dead-ended with the mouse-keyboard-screen configuration?

And what about Leopard? Apple has shown off only a handful of new features, and none of them seems revolutionary enough to inspire someone to tattoo an Apple logo on a visible body area.

Corporate Amnesia

Companies often fail because they forget who they are. When the company that makes fantastic soups repositions itself as "a home branding portfolio," when a newspaper stops talking about news and refers to its stories solely as *content,* and especially when the bank that holds your mortgage starts advertising that "Our currency is people, not money," it's time to worry.

I'm certainly not worried about Apple Comp—sorry, Apple Inc. Not yet. It has built an entire business out of hiding the word *computer* from its products' users. Now it has just gone a step further and removed the word from its name. So long as it remembers the word's importance, everything's cool.

But I've been a watcher of corporations for far too long not to worry about a day, twenty years from now, when the company's name is Ako, its logo is a black square inside an orange square, and its most popular product is a line of snack sandwiches that stay fresh without refrigeration.

Andy Ihnatko is the technology columnist for the *Chicago Sun-Times* and the author of the forthcoming *Mac OS X Leopard Book* (Wiley).

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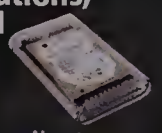

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